

Siemens PLM Connection

Teamcenter for High Tech and Electronics

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Americas 2008

PLM Software

Answers for industry.

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Agenda

Business solution summary

- Strategic Product Planning
- Virtual Product Development
- Environmental Sustainability

Teamcenter for high tech and electronics

What's New in Teamcenter for HTE?

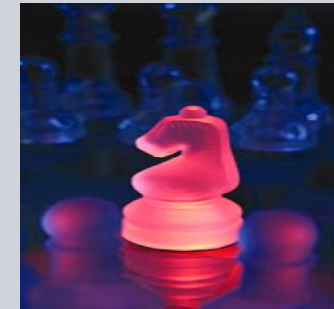


Business Solutions for the High Tech and Electronics Industry

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Strategic Product Planning

- Customer Needs Management
- Portfolio Optimization
- Program Execution Management
- Platform Planning and Design



Virtual Product Development

- Whole Product Management
- Integrated Product Development
- Digital Validation
- Global Collaboration



Environmental Sustainability (Green)

- Material and Substance Analysis and Reporting
- Environmental Stewardship
- Energy use and Carbon Footprint optimization



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What's New for high tech and electronics?

- Teamcenter unified architecture embeds Project and Requirements management into one platform.
- Vendor Part Management
 - Support for Commodity part management in electronics designs
- Reference Designator Management
 - ECAD Design BOM support for reference designators, find numbers
- PCB Visualization
 - PCB and Schematic viewing
- PDX Export
 - Standards based data export capability

Other capabilities of value to high tech and electronics companies...



ECAD design and process

- Teamcenter ECAD tool integration (Cadence, Mentor...)
- PCB Exchange with NX (physical models in Teamcenter)
- FlexPCB design in NX

Physical system design and modelling

- Motion Control systems in NX6 – Simulink, MatLab
- Thermal, Flow and Vibration analysis

Software Management

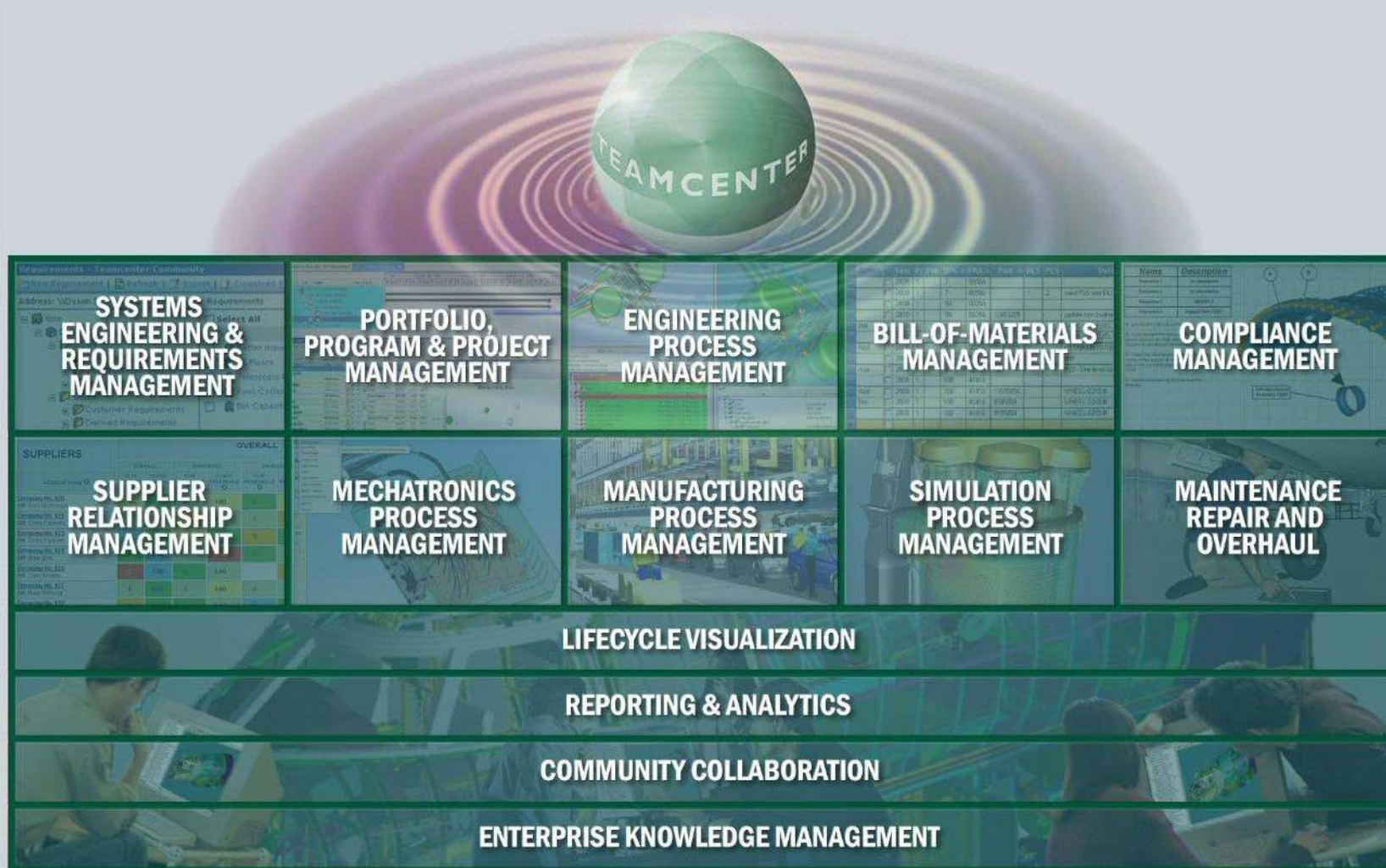
- Software source code management with Clearcase integration
- Embedded software management for multi-controller systems
- Rhapsody integration for MDD

Product and Process

- Platform planning and configuration
- Change and Workflow
- Documentation
- etc...

Teamcenter Digital Lifecycle Management Solutions

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Systems Engineering & Requirements Management

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Customer Needs Management

- Unified Requirements Management



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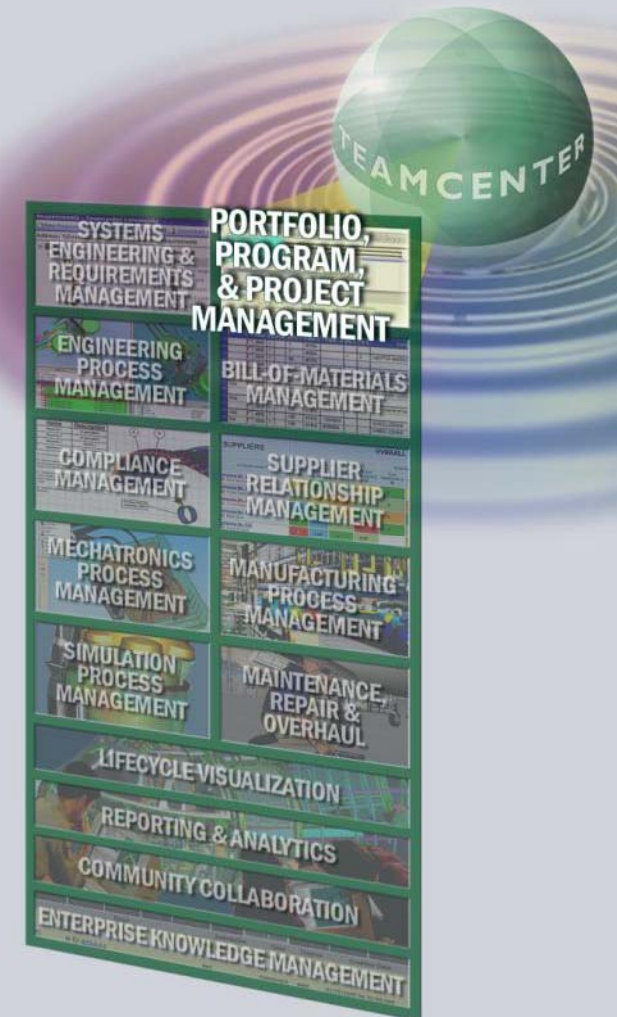
Portfolio, Program & Project Management

Portfolio Planning

- Decision Support for NPDI

Program Execution Management

- Phase-Gate
- Project driven Workflow



Engineering Process Management

- Change Management
- Process Workflow
- Electronic Signoff



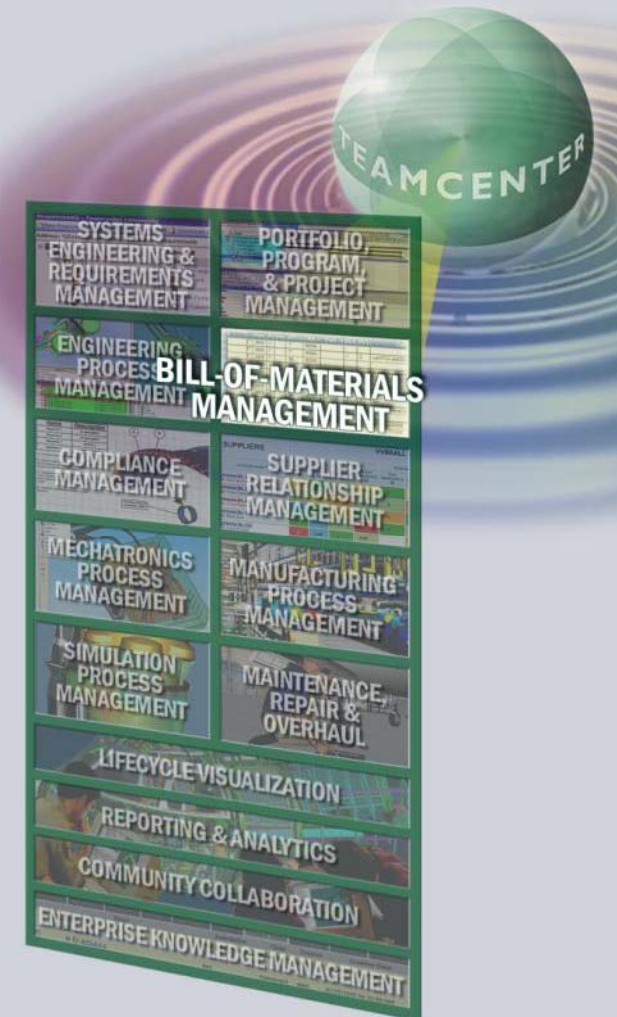
Bill-of-Materials Management

New Features

- PCB Reference Designator Support

Existing Features

- Configuration views and context
 - As-designed and built
 - Effectivity
- Platform Design
 - Options and Variants
 - Modules
 - Variant BOM
 - Model Hierarchy



Reference Designator Support (new)

Needed for PCB BOM management

- Find numbers
- Reference designators
- Validation
- Packed-unpacked view
- Occurance based
- Search
- BOM compare enabled

Initial Structure

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

Back - PSE (ytu (ytu) - dba/DBA [IMC-10001])

Enter Item ID to Search

Quick Links **Customize**

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Open Items

- Getting Started
- My Teamcenter
- PSE**
- Schedule Manager
- CAE SE
- Validation
- StructureMap Builder
- DesignContext
- CM Viewer
- Organization

Getting Started My Teamcenter PSE x

000842/A;1-root - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack	Mak...	Unit C
000842/A;1-root (view)						
000843/A;1-resister	10			None		each
000843/A;1-resister	10			None		each
000843/A;1-resister	10			None		each
000843/A;1-resister	10			None		each
000844/A;1-capacitor	20			None		each
000844/A;1-capacitor	20			None		each
000844/A;1-capacitor	20			None		each
000844/A;1-capacitor	20			None		each
000845/A;1-connector	30			None		each
000845/A;1-connector	30			None		each
000845/A;1-connector	30			None		each
000845/A;1-connector	30			None		each

IC Edit Context: No IC context

Communication Monitor Server Call Chattiness Monitor

Incident count: 77 (App=PSEApplication) (DMS_CLIENT=ytump3f)
 The last 50 calls happened in 0.66220207 seconds.
 On a customer WAN with 0.2 second latency, this could be 10.66220207 seconds.

Call time	Call made	Duration

Ready

Entering Duplicate Value...

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

Back - PSE (ytu (ytu) - dba/DBA [IMC-10001])

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Ready

Getting Started My Teamcenter *PSE x

000842/A;1-root - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack	Mak...	Unit C
000842/A;1-root (view)						
000843/A;1-resister	10		R1		None	each
000843/A;1-resister	10		R2		None	each
000843/A;1-resister	10				None	each
000843/A;1-resister	10				None	each
000844/A;1-capacitor	20				None	each
000844/A;1-capacitor	20				None	each
000844/A;1-capacitor	20				None	each
000844/A;1-capacitor	20				None	each
000845/A;1-connector	30				None	each
000845/A;1-connector	30				None	each
000845/A;1-connector	30				None	each
000845/A;1-connector	30				None	each

IC Edit Context: No IC context

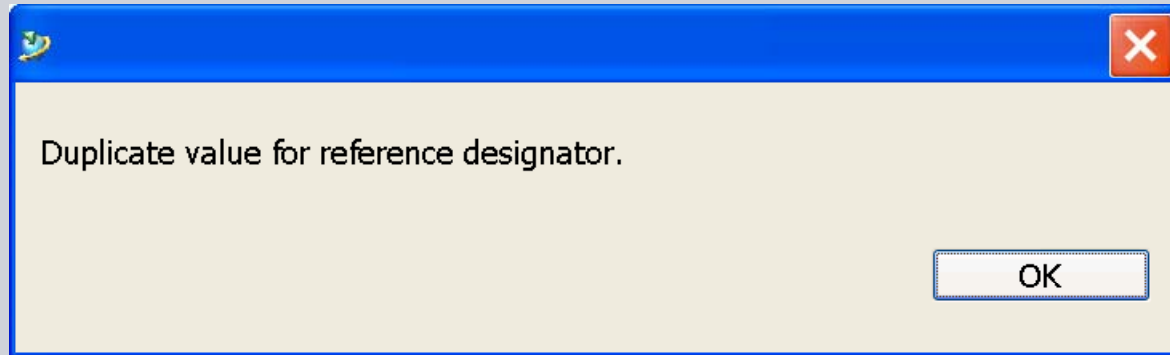
Communication Monitor Server Call Chattiness Monitor

Incident count: 77 (App=PSEApplication) (DMS_CLIENT=ytump3f)
 The last 50 calls happened in 0.66220207 seconds.
 On a customer WAN with 0.2 second latency, this could be 10.66220207 seconds.

Call time	Call made	Duration
-----------	-----------	----------

3

Error message



Bad Format

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

Back - PSE (ytu (ytu) - dba/DBA [IMC-10001]) UGS Teamcenter

Enter Item ID to Search

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Getting Started My Teamcenter *PSE x

000842/A;1-root - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack	Mak...	Unit C
000842/A;1-root (view)						
000843/A;1-resister	10		R1		None	each
000843/A;1-resister	10		werri		None	each
000843/A;1-resister	10				None	each
000843/A;1-resister	10				None	each
000844/A;1-capacitor	20				None	each
000844/A;1-capacitor	20				None	each
000844/A;1-capacitor	20				None	each
000844/A;1-capacitor	20				None	each
000845/A;1-connector	30				None	each
000845/A;1-connector	30				None	each
000845/A;1-connector	30				None	each
000845/A;1-connector	30				None	each

IC Edit Context: No IC context

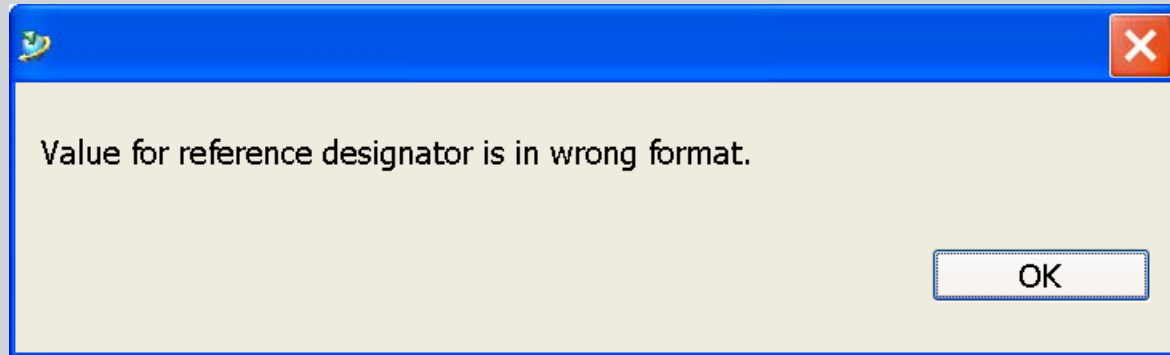
Communication Monitor Server Call Chattiness Monitor

Incident count: 80 (App=PSEApplication) (DMS_CLIENT=ytump3f)
 The last 50 calls happened in 0.404310492 seconds.
 On a customer WAN with 0.2 second latency, this could be 10.404310492 seconds.

Call time	Call made	Duration
-----------	-----------	----------

Ready

Error message



Pack...

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

Back - PSE (ytu (ytu) - dba/DBA [IMC-10001])

Getting Started My Teamcenter PSE x

000842/A;1-root - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack	Mak...	Unit C
000842/A;1-root (view)						
000843/A;1-resister	10		R1	None	each	
000843/A;1-resister	10		R2	None	each	
000843/A;1-resister	10		R3	None	each	
000843/A;1-resister	10		R5	None	each	
000844/A;1-capacitor	20		C1	None	each	
000844/A;1-capacitor	20		C3	None	each	
000844/A;1-capacitor	20		C4	None	each	
000844/A;1-capacitor	20		C10	None	each	
000845/A;1-connector	30		SK1SK1	None	each	
000845/A;1-connector	30		SK1SK2	None	each	
000845/A;1-connector	30		SK1SK4	None	each	
000845/A;1-connector	30		SK1SK5	None	each	

IC Edit Context: No IC context

Communication Monitor Server Call Chattiness Monitor

Incident count: 84 (App=PSEApplication) (DMS_CLIENT=ytump3f)
 The last 50 calls happened in 0.393948666 seconds.
 On a customer WAN with 0.2 second latency, this could be 10.393948666 seconds.

Call time	Call made	Duration
-----------	-----------	----------

Ready 3

Packed

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

UGS Teamcenter

Back - PSE (ytu (ytu) - dba/DBA [IMC-10001])

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- Organization

Getting Started | My Teamcenter | **PSE**

000842/A;1-root - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack	Mak...	Unit C
000842/A;1-root (view)						
000843/A;1-resister ...	10	4	R1-R3.R5		None	each
000844/A;1-capacit...	20	4	C1.C3-C4.C10		None	each
000845/A;1-connect...	30	4	SK1SK1-SK1SK2.SK1SK4...		None	each

IC Edit Context: No IC context

Communication Monitor | Server Call Chattiness Monitor

Incident count: 84 (App=PSEApplication) (DMS_CLIENT=ytump3f)
 The last 50 calls happened in 0.393948666 seconds.
 On a customer WAN with 0.2 second latency, this could be 10.393948666 seconds.

Call time	Call made	Duration
-----------	-----------	----------

Ready

3

Change Find Number? No!

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

Back - PSE (ytu (ytu) - dba/DBA [IMC-10001])

Enter Item ID to Search

Quick Links **Customize**

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Getting Started | My Teamcenter | **PSE**

000842/A;1-root - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack	Mak...	Unit C
000842/A;1-root (view)						
000843/A;1-resister	10		R1	None	each	
000843/A;1-resister	10		R2	None	each	
000843/A;1-resister	10		R3	None	each	
000843/A;1-resister	10		R5	None	each	
000844/A;1-capacit...	20	4	C1.C3-C4.C10	None	each	
000845/A;1-connect...	30	4	SK1SK1-SK1SK2.SK1SK4...	None	each	

IC Edit Context: No IC context

Communication Monitor | Server Call Chattiness Monitor

Incident count: 84 (App=PSEApplication) (DMS_CLIENT=ytump3f)
 The last 50 calls happened in 0.393948666 seconds.
 On a customer WAN with 0.2 second latency, this could be 10.393948666 seconds.

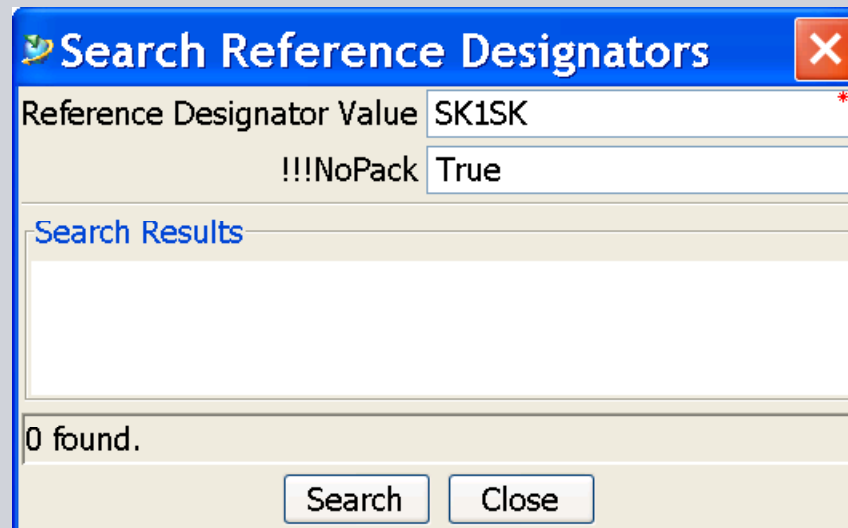
Call time	Call made	Duration

Ready



Search for it!

Support wild card



Search Reference Designators

Reference Designator Value SK1SK *

!!!NoPack True

Search Results

0 found.

Search Close

Found it!

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

UGS Teamcenter

Back PSE (ytu (ytu) - dba/DBA [IMC-10001])

Enter Item ID to Search

Quick Links Customize

- Home
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- My Links

Open Items

- 000842/A;1-root (view)

History

- 000842/A;1-root
- Getting Started
- My Teamcenter
- PSE
- Schedule Manager
- CAE SE
- Validation
- StructureMap Builder
- DesignContext
- CM Viewer
- Organization

Getting Started My Teamcenter *PSE

000842/A;1-root - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack	Mak...	Unit Of M
000842/A;1-root (view)						
000843/A;1-resister	10		R1		None	each
000843/A;1-resister	10		R2		None	each
000843/A;1-resister	10		R3		None	each
000843/A;1-resister	10		R5		None	each
000844/A;1-capacit...	20	4	C1,C3-C4,C10		None	each
000845/A;1-connector	30		SK1SK1	True	None	each
000845/A;1-connector	30		SK1SK2		None	each
000845/A;1-connector	30		SK1SK4		None	each
000845/A;1-connector	30		SK1SK5		None	each

Search Reference Designators

Reference Designator Value SK1SK

!!!NoPack True

Search Results

000845/A;1-connector

1 found.

Search Close

Communication Monitor Server Call Chattiness Monitor

Incident count: 88 (App=PSEApplication) (DMS_CLIENT=ytump3f)

The last 50 calls happened in 4.746279548 seconds.

On a customer WAN with 0.2 second latency, this could be 14.746279548 seconds.

Call time	Call made	Duration
T-4.740229518	ICCTBOMLine::refresh	0.003195121

Loading Information Center data.

Too Many Results?

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

UGS Teamcenter

Back - PSE (ytu (ytu) - dba/DBA [IMC-10001])

Enter Item ID to Search

Quick Links Customize

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Getting Started

My Teamcenter

PSE

Schedule Manager

CAE SE

Validation

StructureMap Builder

DesignContext

CM Viewer

Organization

Loading Information Center data.

Getting Started My Teamcenter *PSE x

000842/A;1-root - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack	Mak...
000842/A;1-root (view)					
000843/A;1-resister	10		R1		None
000843/A;1-resister	10		R2		None
000843/A;1-resister	10		R3		None
000843/A;1-resister	10		R5		None
000844/A;1-capacit...	20	4	C1.C3-C4.C10		None
000845/A;1-connector	30		SK1SK1	True	None
000845/A;1-connector	30		SK1SK2		None
000845/A;1-connector	30		SK1SK4		None
000845/A;1-connector	30		SK1SK5		None

Search Reference Designators

Reference Designator Value R

!!!NoPack

Search Results

- 000843/A;1-resister
- 000843/A;1-resister
- 000843/A;1-resister

4 found.

Search Close

Packed Line? OK!

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

UGS Teamcenter

Back - PSE (ytu ytu) - dba/DBA [IMC-10001]

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Getting Started

My Teamcenter

PSE

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Validation

StructureMap Builder

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Loading Information Center data.

Getting Started My Teamcenter *PSE x

000842/A;1-root - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack	Mak...
000842/A;1-root (view)					
000843/A;1-resister	10		R1		None
000843/A;1-resister	10		R2		None
000843/A;1-resister	10		R3		None
000843/A;1-resister	10		R5		None
000844/A;1-capacit...	20	4	C1,C3-C4,C10		None
000845/A;1-connector	30		SK1SK1	True	None
000845/A;1-connector	30		SK1SK2		None
000845/A;1-connector	30		SK1SK4		None
000845/A;1-connector	30		SK1SK5		None

Search Reference Designators

Reference Designator Value C3

!!!NoPack

Search Results

000844/A;1-capacitor x 4

1 found.

Search Close

BOM Compare

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

UGS Teamcenter

Back PSE (ytu ytu) - dba/DBA [IMC-10001]

Getting Started My Teamcenter PSE x

Enter Item ID to Search

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Getting Started

My Teamcenter

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CAE SE

Validation

StructureMap Builder

DesignContext

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Organization

Ready

000842/A:1-root (view) - Latest Working - Date - "...

BOM Line	Fi...	Q...	Reference D...	!!!NoPa
000842/A:1-root (view)				
000843/A:1-resistor	10		R1	
000843/A:1-resistor	10		R2	
000843/A:1-resistor	10		R3	
000843/A:1-resistor	10		R5	
000844/A:1-capacitor	20		C1	
000844/A:1-capacitor	20		C3	
000844/A:1-capacitor	20		C4	
000844/A:1-capacitor	20		C10	
000845/A:1-connector	30		SK1SK1	
000845/A:1-connector	30		SK1SK2	
000845/A:1-connector	30		SK1SK4	
000845/A:1-connector	30		SK1SK5	

000846/A:1-newRoot - Latest Working - Date - "...

BOM Line	Fi...	Q...	Referenc...	!!!NoP
000846/A:1-newRoot				
000845/A:1-connector	10		SK1SK2	
000845/A:1-connector	10		SK1SK3	
000845/A:1-connector	10		SK1SK10	
000845/A:1-connector	10		SK1SK11	
000844/A:1-capacitor	20		C1	
000844/A:1-capacitor	20		C3	
000844/A:1-capacitor	20		C4	
000844/A:1-capacitor	20		C10	
000843/A:1-resistor	30		R1	
000843/A:1-resistor	30		R2	
000843/A:1-resistor	30		R3	
000843/A:1-resistor	30		R5	

BOM Compare

Mode: Single level (with find no)

Report: Single level (with find no)
Single level
Multi Level (with find no)
Multi Level
Lowest Level
Single level (with reference designator)

Communication Monitor Server

Inciden
The las
On a cl
Call time Call made

Compare Result

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

UGS Teamcenter

Back PSE (ytu (ytu) - dba/DBA [IMC-10001])

Getting Started My Teamcenter PSE x

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Organization

Ready

000842/A:1-root (view) - Latest Working - Date ...

BOM Line	Fi...	Q...	Reference D...	!!!
000842/A:1-root (view)				
000843/A:1-resistor	10		R1	
000843/A:1-resistor	10		R2	
000843/A:1-resistor	10		R3	
000843/A:1-resistor	10		R5	
000844/A:1-capacitor	20		C1	
000844/A:1-capacitor	20		C3	
000844/A:1-capacitor	20		C4	
000844/A:1-capacitor	20		C10	
000845/A:1-connector	30		SK1SK1	
000845/A:1-connector	30		SK1SK2	
000845/A:1-connector	30		SK1SK4	

000846/A:1-newRoot - Latest Working - Date - "...

BOM Line	Fi...	Q...	Referenc...	!!!Nc
000846/A:1-newRoot				
000845/A:1-connector	10		SK1SK2	
000845/A:1-connector	10		SK1SK3	
000845/A:1-connector	10		SK1SK10	
000845/A:1-connector	10		SK1SK11	
000844/A:1-capacitor	20		C1	
000844/A:1-capacitor	20		C3	
000844/A:1-capacitor	20		C4	
000844/A:1-capacitor	20		C10	
000843/A:1-resistor	30		R1	
000843/A:1-resistor	30		R2	
000843/A:1-resistor	30		R3	

BOM Compare Report - 000842/A:1-root (view) -> 000846/A:1-newRoot Single level (with find no) LH...

Item Id	Item Name	Find No	Rev	Otv
000843	resistor	10	A->()	4->0
000845	connector	10	()->A	0->4
000843	resistor	30	()->A	0->4
000845	connector	30	A->()	4->0

BOM Compare

Mode: Single level (with find no)

Report ☒

OK Cancel

IC Edit Context: No IC context

3

Result If Packed

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

Back - PSE (ytu ytu) - dba/DBA [IMC-10001]

Getting Started My Teamcenter PSE x

Enter Item ID to Search

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Ready

000842/A;1-root (view) - Latest Working - Date - ...

BOM Line	Fi...	Q...	Reference D...	!!!No
000842/A;1-root (view)				
000843/A;1-resister...	10	4	R1-R3.R5	
000844/A;1-capacit...	20	4	C1.C3.C4.C10	
000845/A;1-connect...	30	4	SK1SK1-SK1...	

000846/A;1-newRoot - Latest Working - Date - "...

BOM Line	Fi...	Q...	Referenc...	!!!NoPa
000846/A;1-newRoot				
000845/A;1-connect...	10	4	SK1SK2-S...	
000844/A;1-capacit...	20	4	C1.C3.C4....	
000843/A;1-resister...	30	4	R1-R3.R5	

BOM Compare Report - 000842/A;1-root (view) -> 000846/A;1-newRoot Single level (with reference design...

Item Id	Item Name	Rev	Otv	Ref Designator
000845	connector	A->()	4->0	SK1SK1-SK1SK2,SK1SK4-SK1SK5
000845	connector	()->A	0->4	SK1SK2-SK1SK3,SK1SK10-SK1SK11

BOM Compare

Mode: Single level (with reference designator)

Report ☒

OK Cancel

Entering Quantity When Reference Designator Is Populated

PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

UGS Teamcenter

Back PSE (ytu (ytu) - dba/DBA [IMC-10001])

Getting Started My Teamcenter PSE x

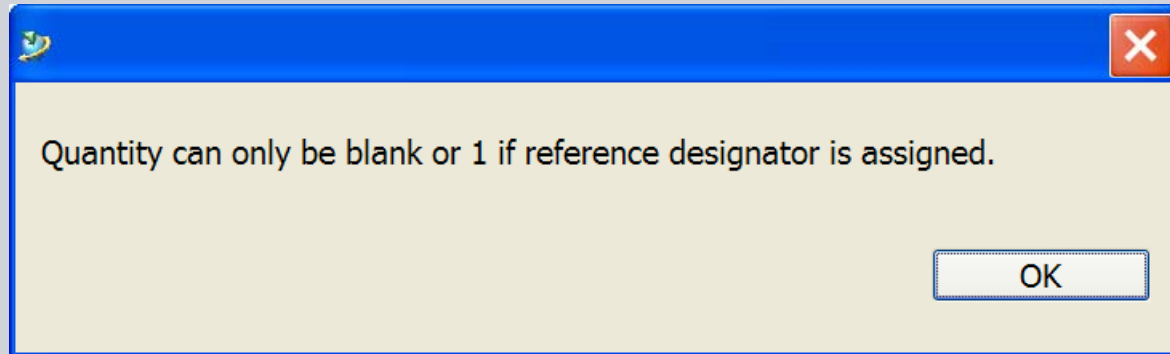
000842/A:1-root (view) - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack
000842/A:1-root (view)				
000843/A:1-resister	10		R1	
000843/A:1-resister	10		R2	
000843/A:1-resister	10		R3	
000843/A:1-resister	10	8	R5	
000844/A:1-capacit	20	4	C1 C3-C4 C10	
000845/A:1-connect	30	4	SK1SK1-SK1SK2.SK1SK4-SK1S...	

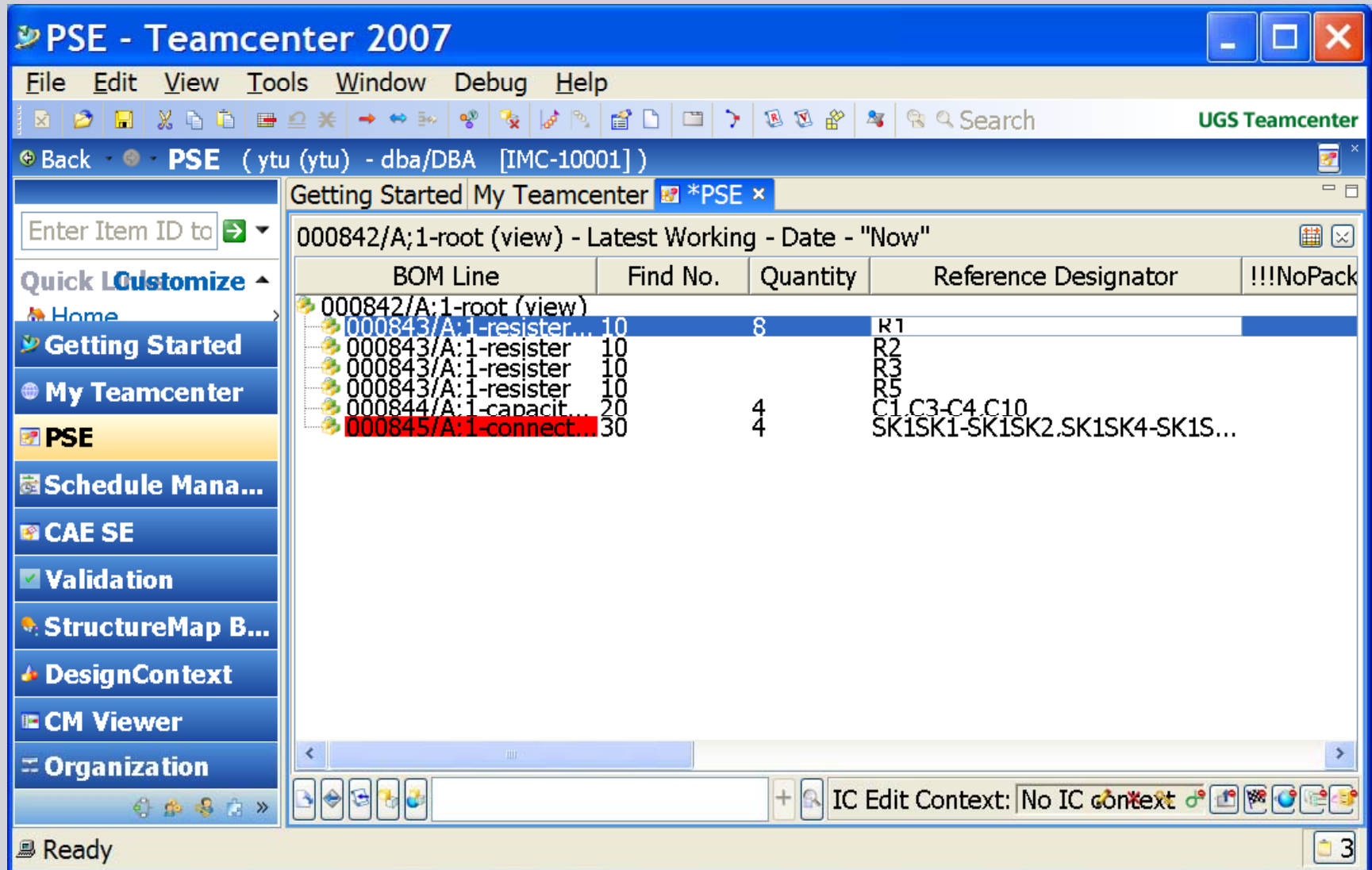
IC Edit Context: No IC context

Ready

Error!



Assign Reference Designator When Quantity Is More Than 1



PSE - Teamcenter 2007

File Edit View Tools Window Debug Help

UGS Teamcenter

Back PSE (ytu (ytu) - dba/DBA [IMC-10001])

Getting Started My Teamcenter *PSE x

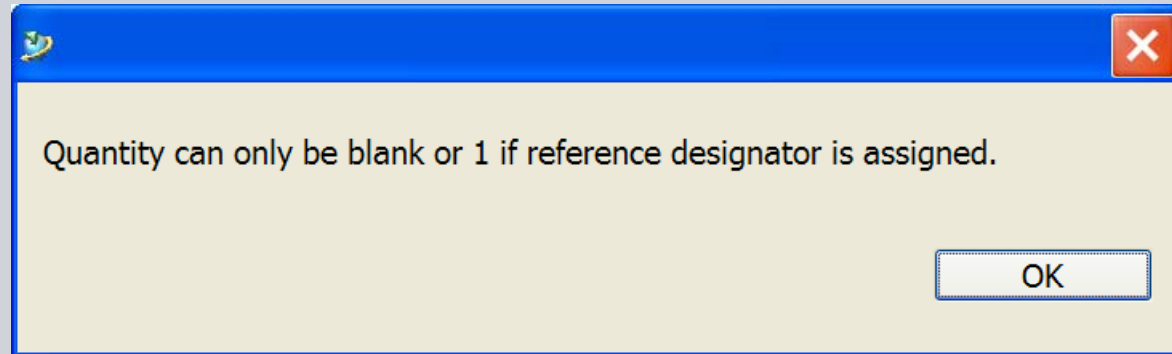
000842/A;1-root (view) - Latest Working - Date - "Now"

BOM Line	Find No.	Quantity	Reference Designator	!!!NoPack
000842/A;1-root (view)				
000843/A;1-resister...	10	8	R1	
000843/A;1-resister	10		R2	
000843/A;1-resister	10		R3	
000843/A;1-resister	10		R5	
000844/A;1-capacit...	20	4	C1 C3-C4 C10	
000845/A;1-connect...	30	4	SK1SK1-SK1SK2.SK1SK4-SK1S...	

IC Edit Context: No IC context

Ready

Error!



Compliance Management

Environmental Stewardship

- Teamcenter for Environmental Compliance
 - Regulatory reporting
 - RoHS
 - WEEE
 - REACH
 - Material and Substance Management



Supplier Relationship Management

New Features

- Vendor Management
 - Vendors
 - Commercial Parts
 - Vendor Parts
 - Vendor Qualification
 - Bid Packages
- PDX Export
 - IPC Standard format

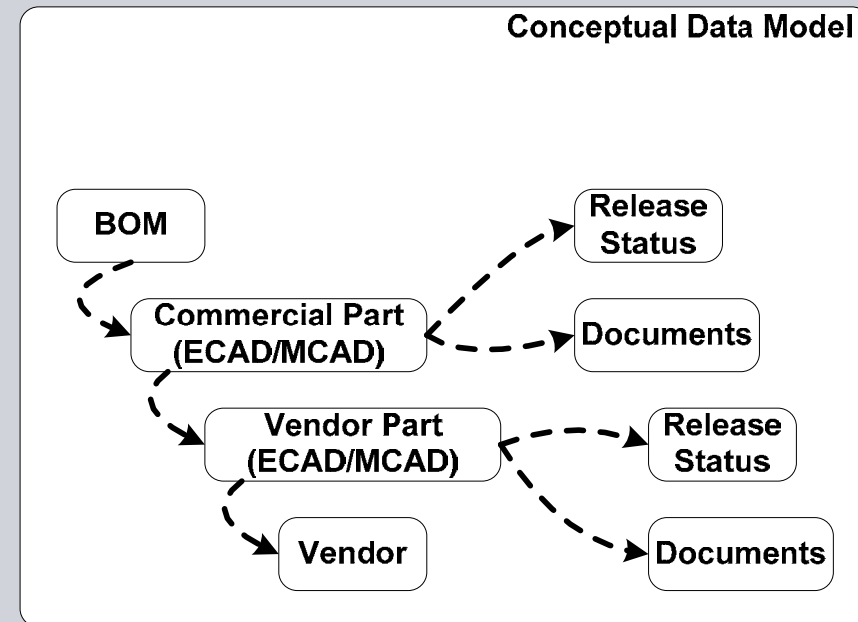


Vendor and Vendor Part management

Vendors can be qualified for parts they provide

Vendor Parts represent parts provided by a Vendor (their number)

**Commercial Parts represent internal parts used in designs
(company number)**



Create Vendor

New Vendor

Vendor

Steps

- Select Type
- Enter Vendor Info**
- Enter vendor Role and
- Enter vendor Master P
- Enter Rev Master For
- Assign to Projects
- Define Options

Define the basic information for the new vendor.

Vendor Information

Vendor ID / Revision ID - Name

Motorola* / A* - Motorola* Assign

Description:

Address:

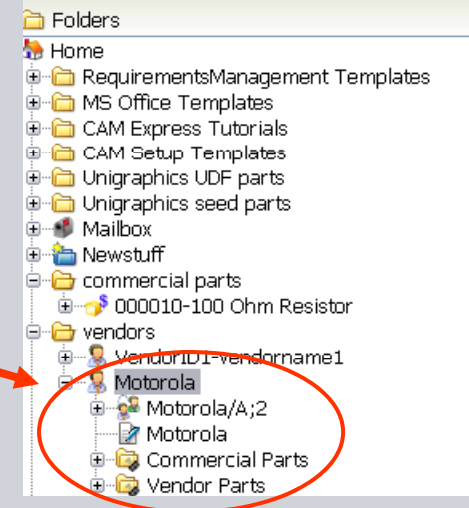
Web Site:

Phone:

Email:

Contact Name:

Back Next Finish Home Close



- Specify Vendor ID and Name
- ID can be entered or auto-generated
- Vendor is created without BMIDE deployment
- Vendor ID and Name supports spaces, commas, &, _, ., -, @, #, (,), "", ', !, <, >.

Create Commercial Part

New Part

CommercialPart

Steps

- Select Type
- Enter Part Information**
- Enter Item Master For
- Enter Rev Master For
- Enter Identifier Basic I
- Enter Additional ID inf
- Enter Additional Rev in
- Assign to Projects
- Define Options

Define the basic information for an part to be created.

Part Information

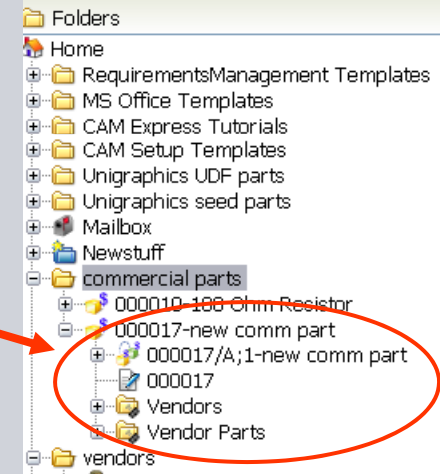
Part No / Rev - Name

000017 / A - new comm part Assign

Description:

Unit of Measure:

Back Next Finish Home Close



- Specify Internal Part ID and Name

Create Vendor Part

New Part

ManufacturerPart

Steps

- Select Type
- Enter Part Information**
- Enter Item Master Form
- Enter Rev Master Form
- Enter Identifier Basic Information
- Enter Additional ID Information
- Enter Additional Revision Information
- Assign to Projects
- Define Options

Define the basic information for an part to be created.

Vendor Part Information

Vendor's Part Number: 12345 *

Vendor's Part Name: new vendor part *

Vendor ID: Motorola *

Vendor Name: Motorola

Description:

Unit of Measure:

Back Next Finish Home Close

Open by Name

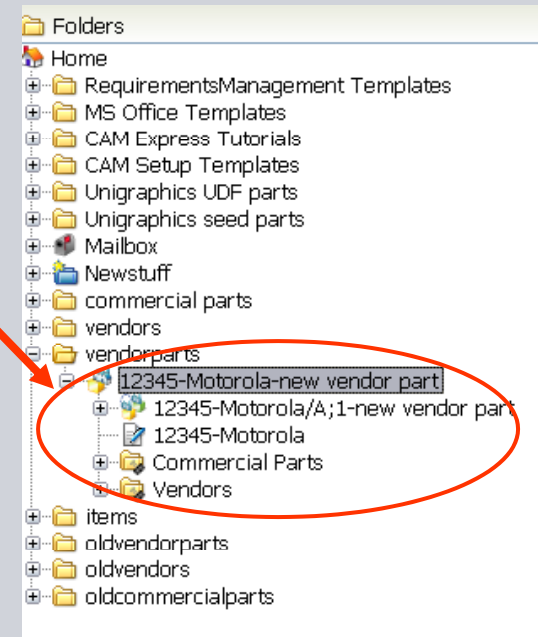
Name

ID: Mot* Find

Object

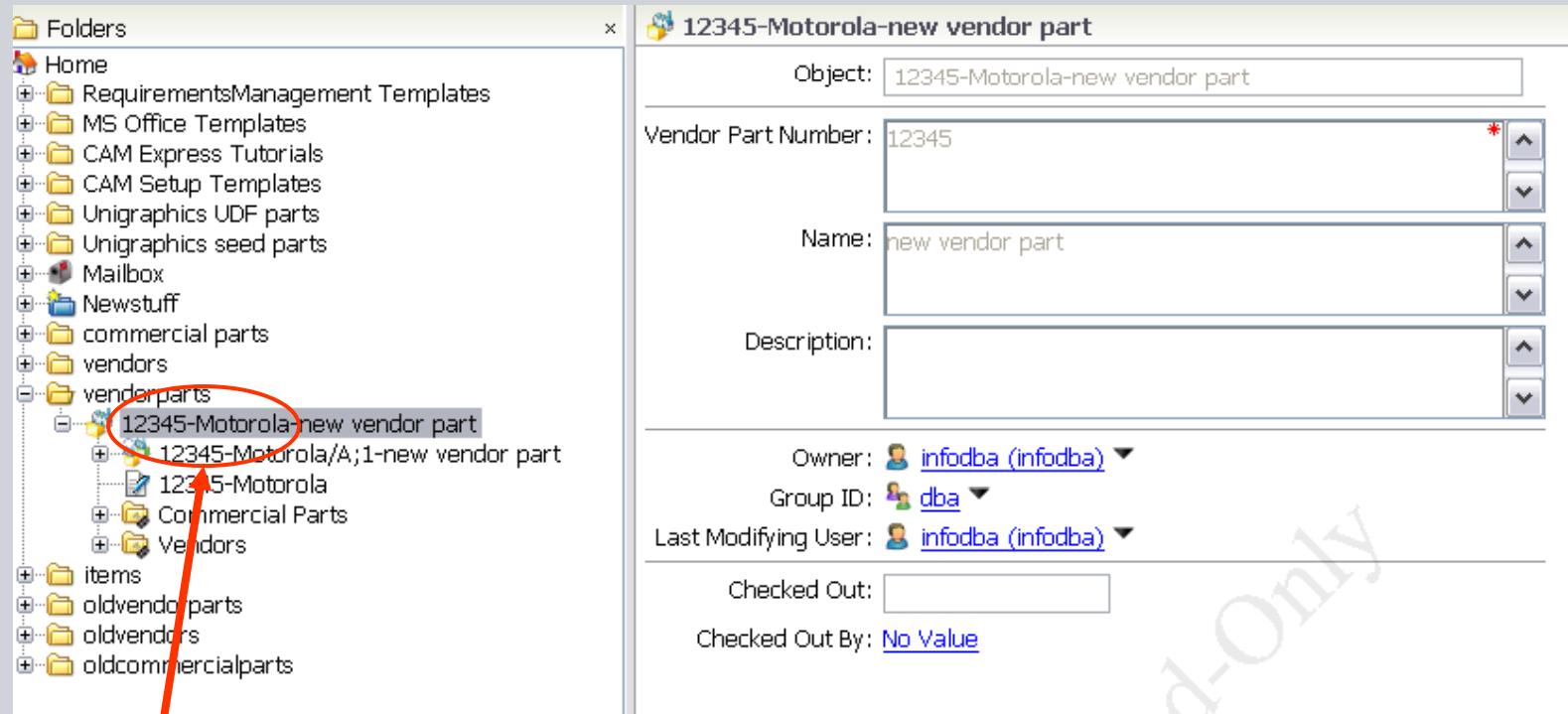
Motorola

1 Object(s) found (1-1 shown)



- Specify Vendor's Part Number, Name, and Vendor ID
 - Vendor ID can be selected from search
- Vendor is automatically related to new Vendor Part
- Relation to vendor cannot be changed after creation

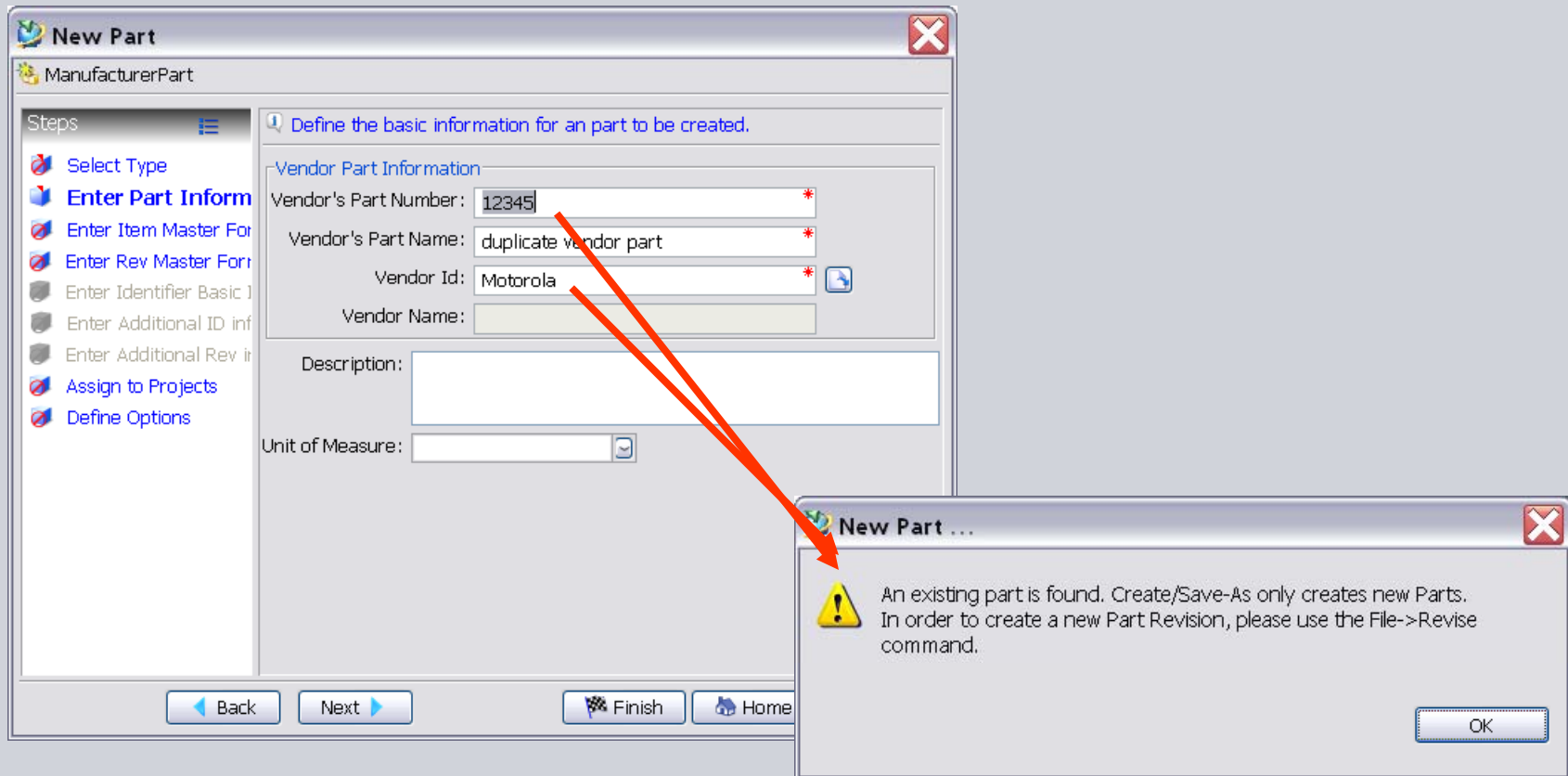
Vendor Part ID and Vendor Part Number



Vendor part ID = <Vendor Part Number>-<Vendor ID>

- Vendor Part ID is automatically generated

Teamcenter Does Not Allow Duplicate Vendor Part Numbers for a Vendor



Teamcenter Allows Duplicate Vendor Part Numbers from Different Vendors

New Part

ManufacturerPart

Steps

- Select Type
- Enter Part Information**
- Enter Item Master Form
- Enter Rev Master Form
- Enter Identifier Basic Information
- Enter Additional ID Information
- Enter Additional Revision Information
- Assign to Projects
- Define Options

Define the basic information for an part to be created.

Vendor Part Information

Vendor's Part Number: 12345 *

Vendor's Part Name: duplicate vendor part *

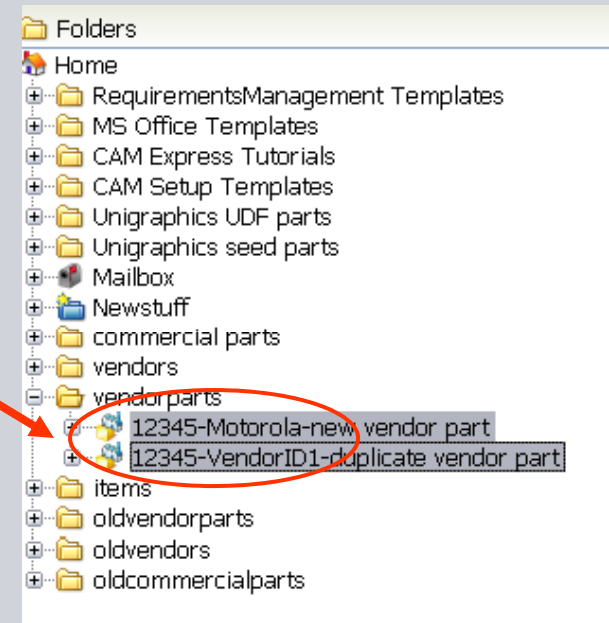
Vendor Id: VendorID1 *

Vendor Name: vendorname1

Description:

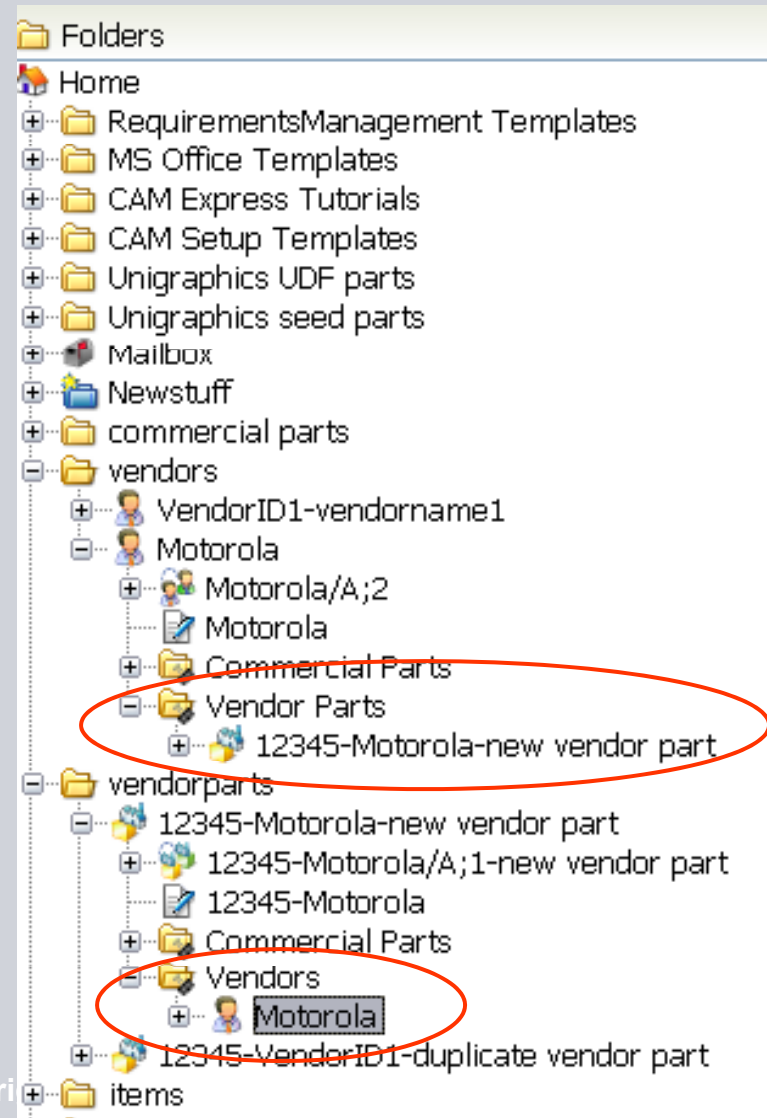
Unit of Measure:

Back Next Finish Home Close



Navigation Between Vendor Part and Vendor

- Use pseudo folders to navigate between related objects



Viewing Details of Related Vendors

The screenshot shows the Siemens Teamcenter interface. On the left is a 'Folders' tree view. The main area displays a 'Vendors' table. The table has five columns: Name, Vendor ID, Description, Address, and Relation. The first two rows of data are visible: 'Motorola' with Vendor ID 'Motorola' and 'vname1' with Vendor ID 'v1'. A red circle highlights the column headers, and a red arrow points to the 'Description' column.

Name	Vendor ID	Description	Address	Relation
Motorola	Motorola	test vendor	2000 Eastman Dr, Milford, OH	Vendors
vname1	v1			Vendors

Columns are configurable. Any properties on the listed objects may be included.

Viewing Details of Related Vendor Parts

Getting Started My Teamcenter

Home

Folders

- Home
 - Mailbox
 - Newstuff
 - Vendors
 - stylesheets
 - items
 - Vendor Parts
 - Commercial Parts
 - 000005-cp5
 - 000008-cp8
 - 000008/A;1-cp8
 - 000008/A
 - Vendors
 - Vendor Parts
 - vp9-v1-vp9name
 - vp12-Motorola-vp12 name
 - 000008
 - Vendors
 - Vendor Parts
 - Other

Vendor Parts

Name	Part Number	Vendor	Part ID	Description	Relation
vp12 name	vp12	Motorola	vp12-Motorola	part description	Vendor Parts
vp9name	vp9	v1-vname1	vp9-v1	desc	Vendor Parts

Details

Viewing Related Vendor Parts in PSE

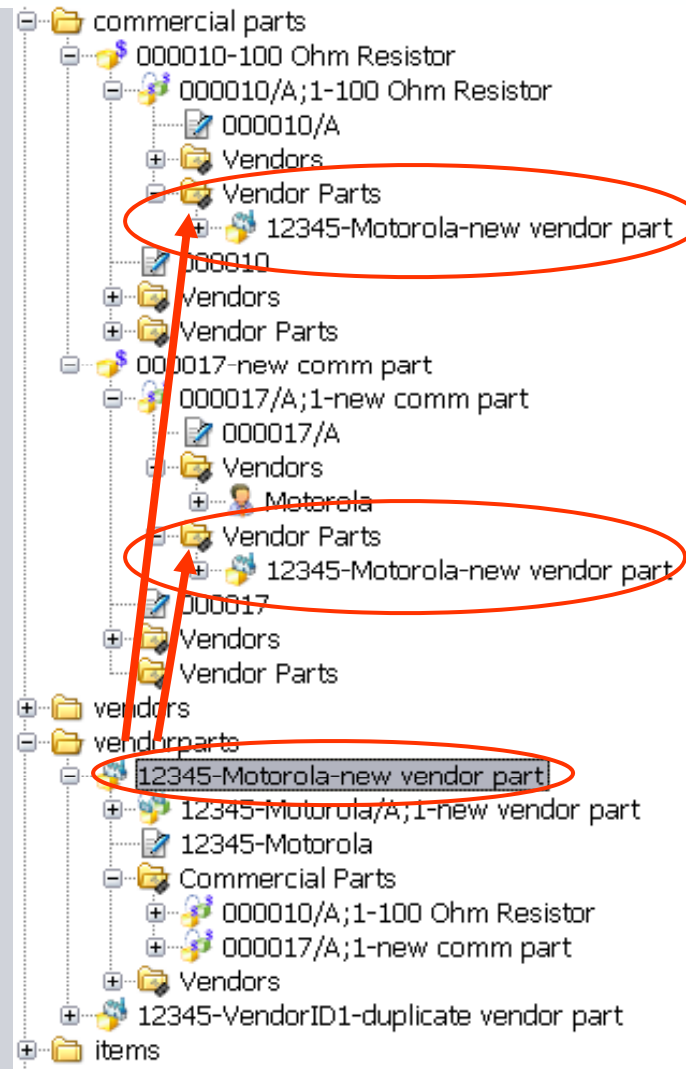
The screenshot shows the Siemens PSE interface. The left pane displays a BOM tree for '000008/A;1-cp8 (view)'. The right pane shows a table of related vendor parts. The 'Attachments' tab is highlighted with a red circle. Two red arrows point from the text labels 'Commercial Part' and 'Vendor Parts' to the corresponding entries in the BOM tree.

Object	Description	Relation
000008/A;1-cp8	desc	!!!
000008/A		Item Masters
Vendors		Collection
Motorola	test vendor	Vendors
v1-vname1		Vendors
Vendor Parts		Collection
vp9-v1-vp9name	desc	Vendor Parts
vp12-Motorola-vp12 name	part description	Vendor Parts

- Use attachments tab to view related vendor and vendor part data

Relate Vendor Part to Multiple Commercial Parts

- Drag / Drop or Cut / Paste vendor parts to pseudo folders on one or more commercial parts
- Operation also supported on pseudo folders of vendor parts (i.e. drop commercial part on vendor part)
- Relations may be removed by 'cutting' items from folders



Create Vendor Part Directly for Commercial Part

Steps

- Select Type
- Enter Part Information**
- Enter Item Master For
- Enter Rev Master For
- Enter Identifier Basic
- Enter Additional ID info
- Enter Additional Rev info
- Assign to Projects
- Define Options

Vendor Part Information

Define the basic information for an part to be created.

Vendor's Part Number: 23456 *

Vendor's Part Name: vendor part for commercial part *

Vendor Id: VendorID1 *

Vendor Name: vendornamed

Description:

Unit of Measure:

Back Next Finish

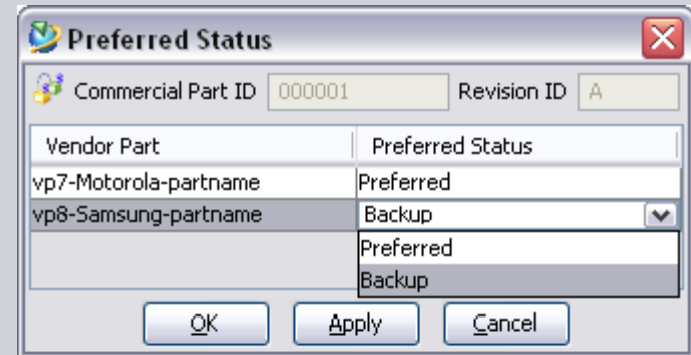
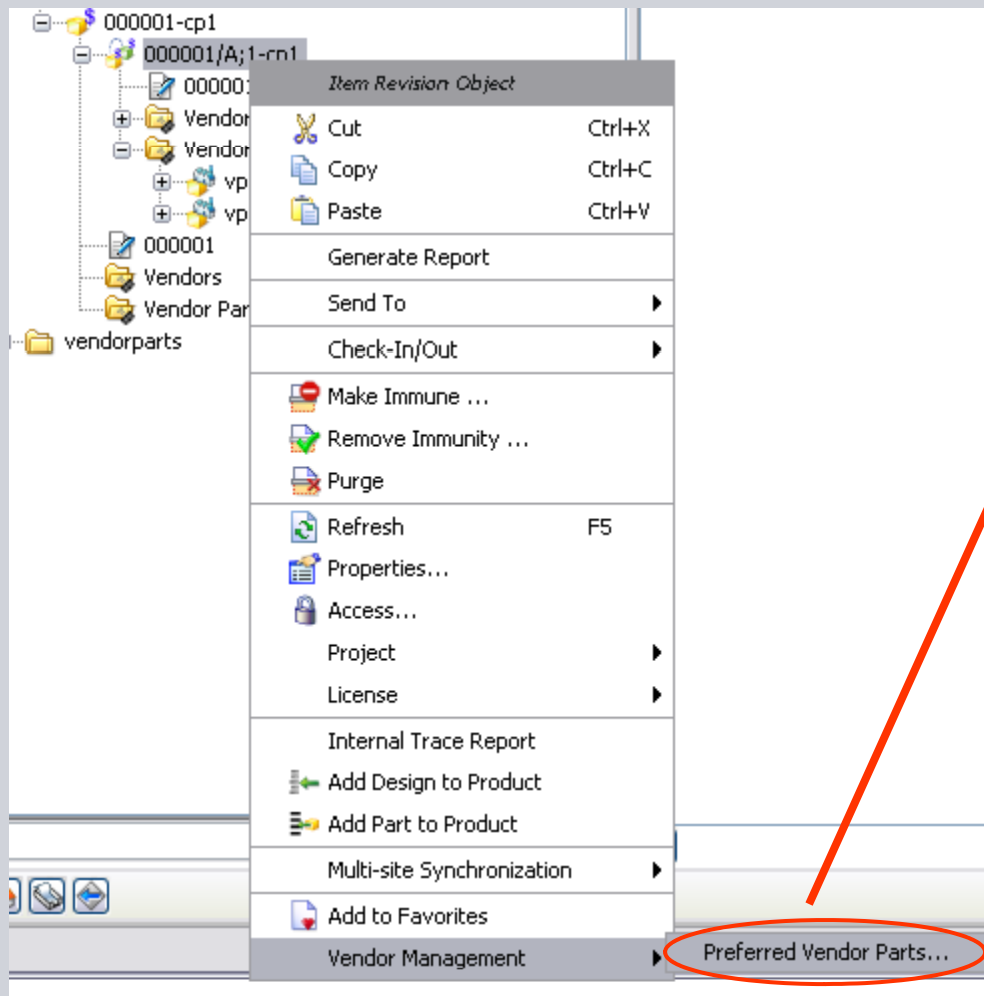
Folders

- Home
- RequirementsManagement Templates
- MS Office Templates
- CAM Express Tutorials
- CAM Setup Templates
- Unigraphics UDF parts
- Unigraphics seed parts
- Mailbox
- Newstuff
- commercial parts
 - 000010-100 Ohm Resistor
 - 000017-new comm part
 - 000017/A;1-new comm part
 - 000017/A
 - Vendors
 - Vendor Parts**
 - 12345-Motorola-new vendor part
 - 000017
 - Vendors
 - Vendor Parts
 - vendors
 - vendorparts

- commercial parts
- 000010-100 Ohm Resistor
- 000017-new comm part
 - 000017/A;1-new comm part
 - 000017/A
 - Vendors
 - Motorola
 - Vendor Parts**
 - 23456-VendorID1-vendor part for co
 - 12345-Motorola-new vendor part
 - 000017
 - Vendors
 - Vendor Parts
 - vendors
 - vendorparts

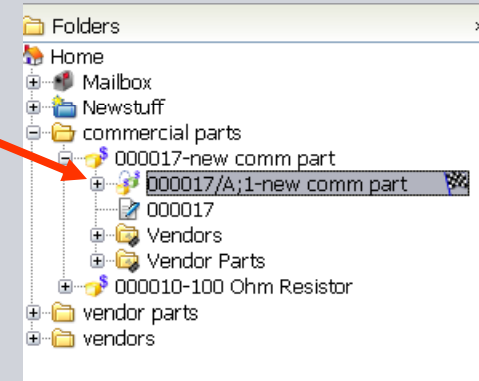
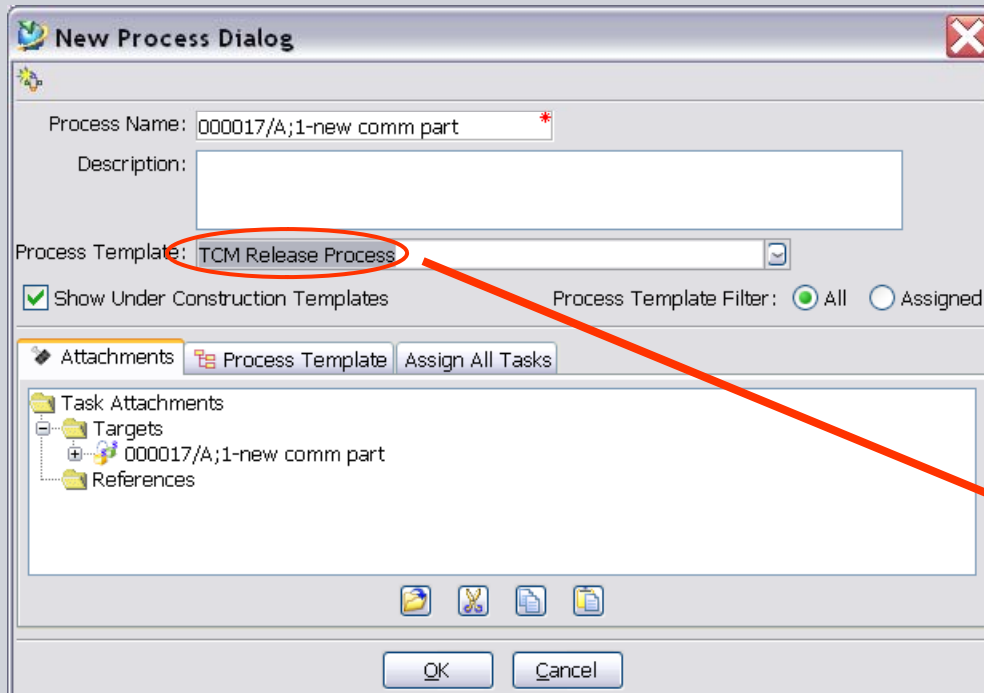
- Select commercial part pseudo folder
- Create new vendor part
- Vendor part is automatically related to selected commercial part

View / Edit Preferred Status



- Select option from context menu
- Dialog is presented with related parts and statuses
- Statuses may be edited

Release Commercial Part



- Use a release workflow
- Release status is attached and part is frozen

Revise Commercial Part

Revise

Based On 000017/A;1-new comm part (Type: CommercialPart)

Steps

- Enter Item Information
- Enter Rev Master For
- Enter Identifier Basic
- Enter Additional ID in
- Enter Additional Rev i
- Define Attached Data
- Assign to Projects
- Define Options

Define the basic information for the new item revision.

Item Information

Item ID / Revision ID - Name

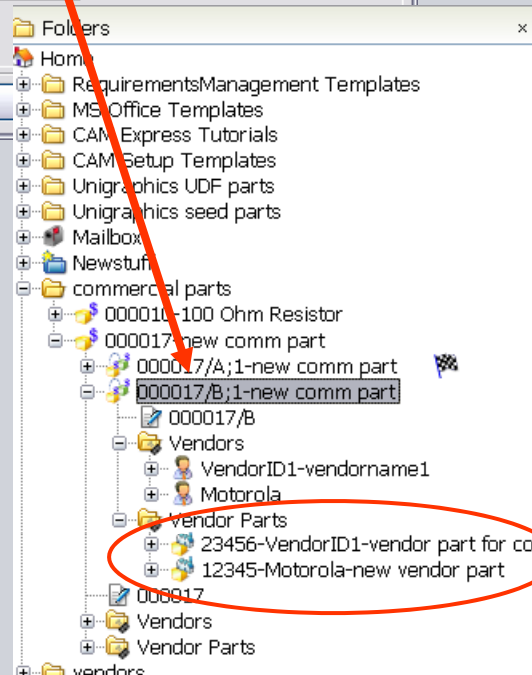
000017 / B - new comm part

Description:

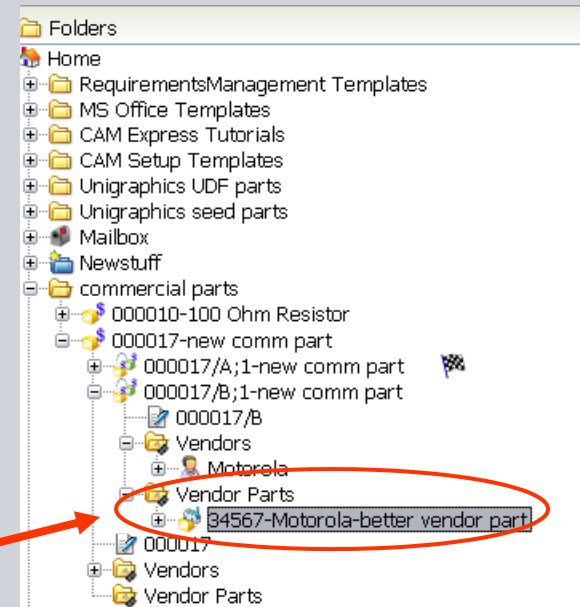
Unit of Measure:

Back Next

- Vendor parts may be added or removed from rev B



- Revise: A -> B
- Vendor part relations are copied to new revision



Configure Vendor Part Search in Query Builder

The screenshot shows the Siemens Query Builder interface. On the left is a tree view of the project structure, with 'Vendor Parts' selected. The main area is divided into several sections:

- Name:** Vendor Parts
- Description:** (empty text box)
- Query Types:** Local Query
- Search Class:** ManufacturerPart
- Modifiable Query Types:** Local Query
- Attribute Selection:** A list of attributes for 'ManufacturerPart' is shown, including timestamp, pid, object_properties, lsd, owning_site, archive_info, owning_group, acl_bits, and last_mod_user.
- Search Criteria:** A table defining the search logic, circled in red in the original image.

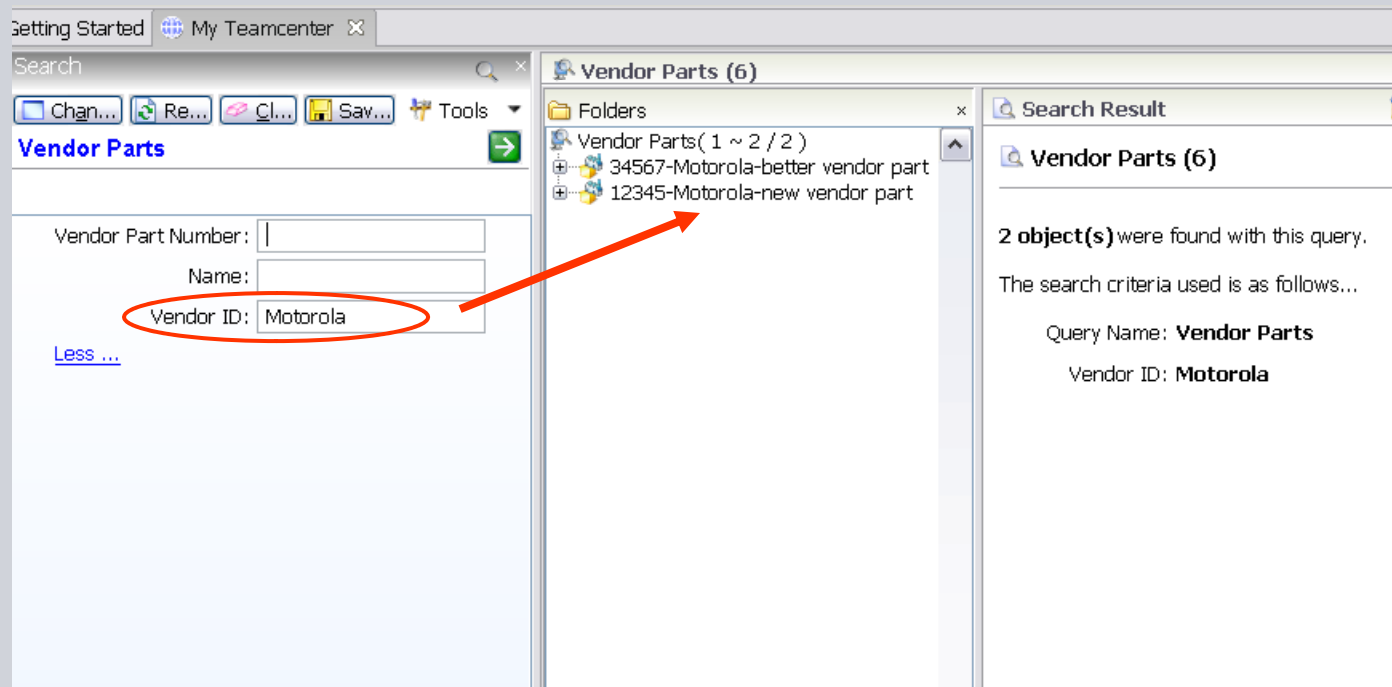
The **Search Criteria** table is as follows:

	Attribute	User Entry L...	User Entry N...		Default Value
	vendor_part_n...	vendor_part_n...	Vendor Part Nu...	=	
AND	object_name	object_name	Name	=	
AND	Vendor:TC_ve...	vendor_item_id	Vendor ID	=	

At the bottom of the interface are buttons for 'Create', 'Delete', 'Modify', and 'Clear'.

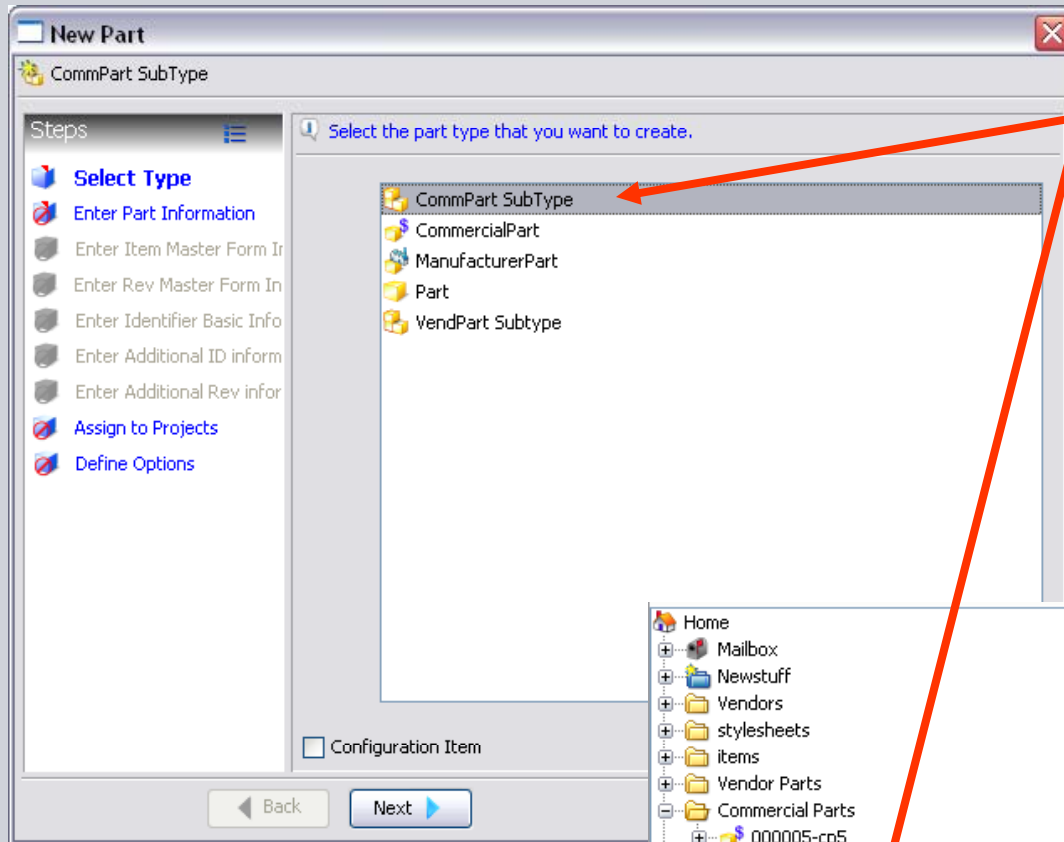
Admin configures search criteria and saves

Search for Vendor Part

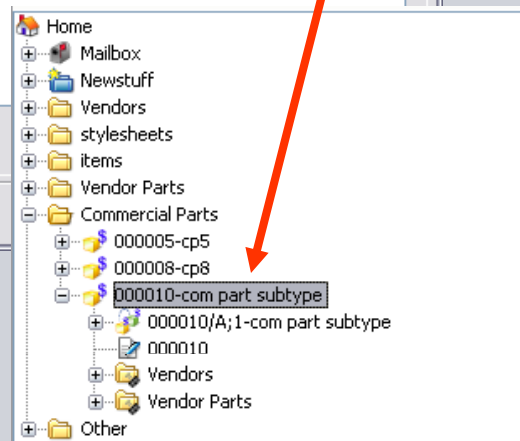


- Users may search by any attribute of vendor part and related vendor (part number, name, vendor ID, etc) as configured by admin

Subtypes of Commercial and Vendor Part



Subtypes of Commercial and Vendor Part are supported in the UI.



Object:	000010-com part subtype
Name:	com part subtype
Description:	test of a subtype of commercial part
Owner:	infodba (infodba)
Group ID:	dba
Last Modifying User:	infodba (infodba)
Checked Out:	
Checked Out By:	No Value

Needed for PCB BOM management

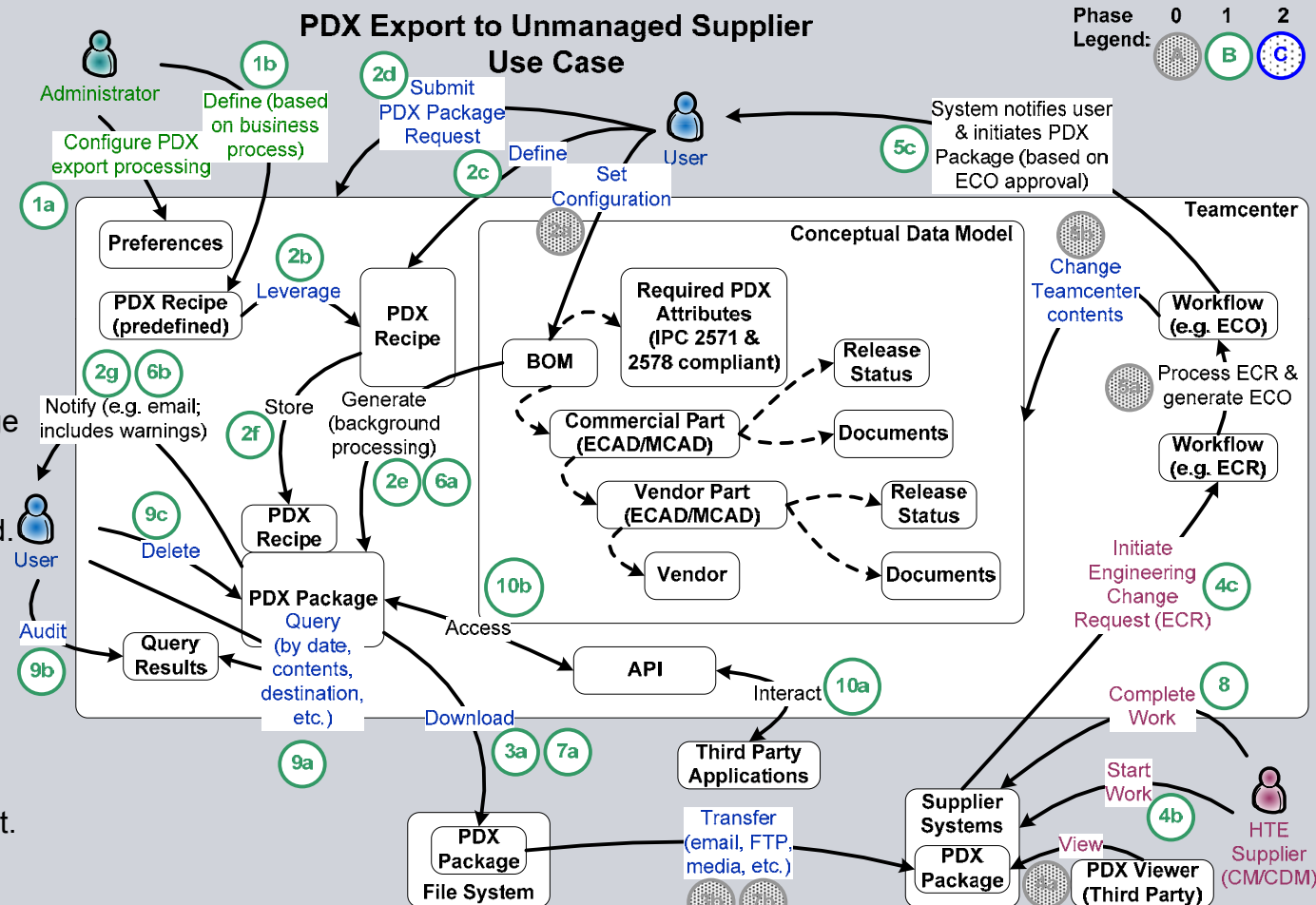
What / Why PDX ?

- **In order to exchange the information across the supply chain there should exist a common format that is understood by all the stakeholders in the supply chain**
- **Product Data eXchange (PDX) is a standard for the e-supply chain in the HTE market.**
- **Product Data eXchange is an ANSI-approved multi-part standard, represented by the IPC 2570 series of specifications**
- **As part of this project Teamcenter would be providing the users with the capability to export Teamcenter data as a PDX package**

PDX Export – the big picture



1. Configure the system for PDX Export
2. Export the data as PDX and create a PDX package
3. Send the PDX package to suppliers
4. Work on any changes if required
5. Any changes go through a change process.
6. The PDX package is regenerated.
7. Resend the data to suppliers
8. Suppliers complete their work using the latest PDX package
9. Query for a PDX package that is created in Teamcenter and view it.
10. Access PDX package from external applications

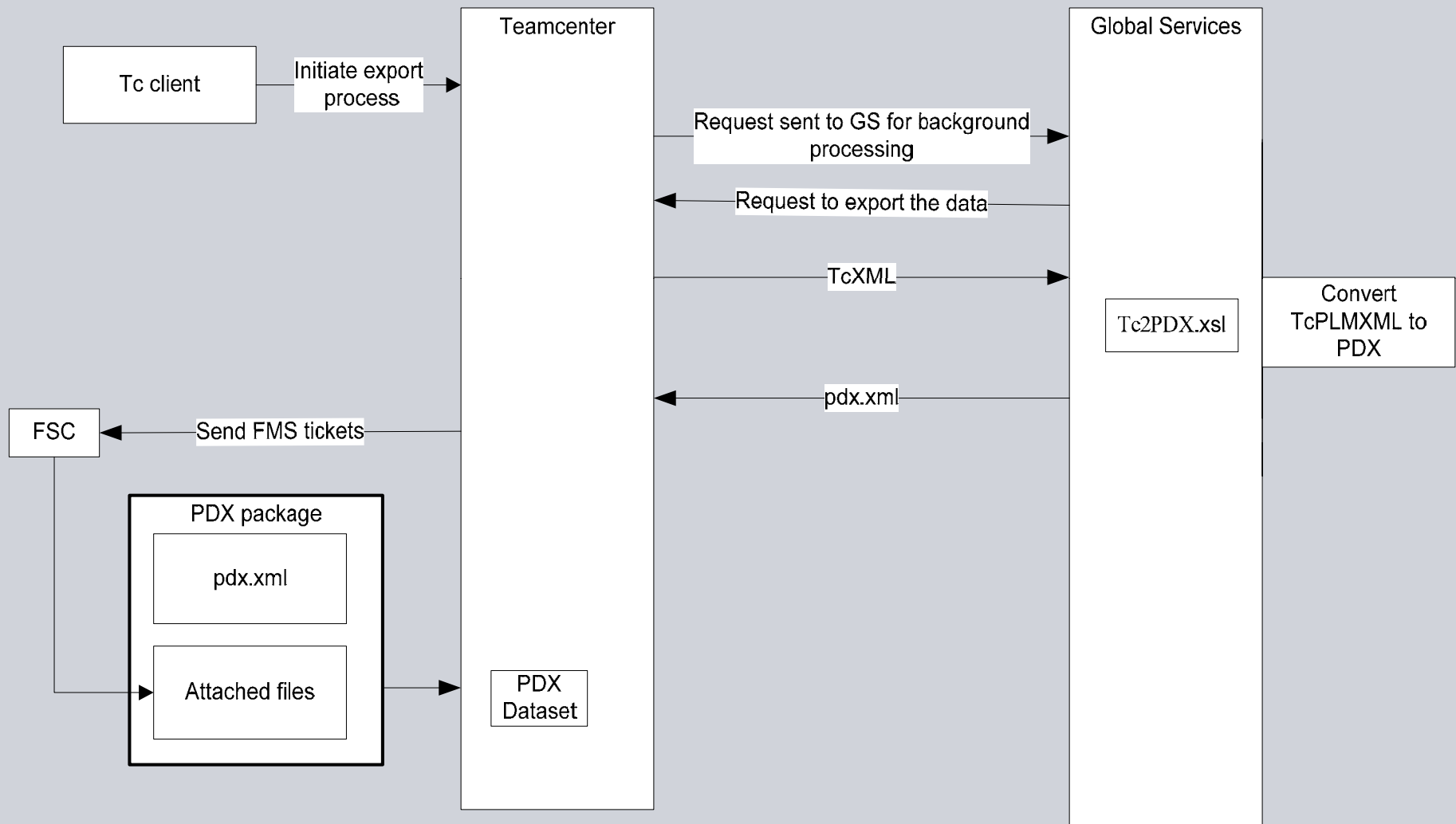


User actions shown with colored text; System actions shown in black text; CM=contract manufacturer; CDM=contract design manufacturer
 Phase Descriptions: 0=Already supported (Tc2007.1), 1=Planned, 2=Under consideration for future release

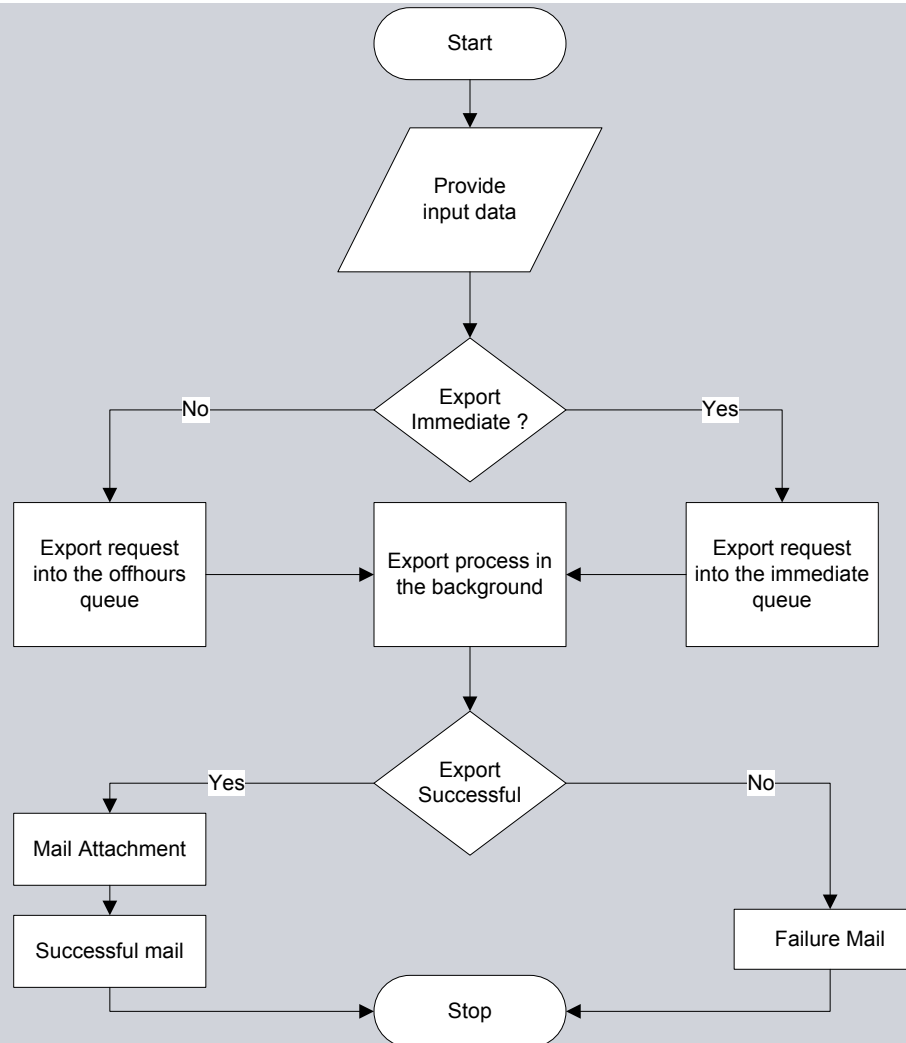
Use Case flow

Step	User Action	System Response
1a	Administrator interacts with Preferences to set PDX export processing parameters	System stores preferences
1b	Administrator defines PDX Recipe (known as transfer mode and closure rules) via Rich Client Administrative UI	System stores PDX Recipe
2a	User sets configuration and revision rules for PDX export	System stores configuration and revision rules
2b	User can review (leverage) pre-defined PDX Recipes	System displays list of pre-defined PDX Recipes
2c	User selects desired PDX Recipe	System stores desired PDX Recipe
2d	User submits request to generate PDX Package	
2e		The system processes the request in the background
2f		The system associates the PDX Recipe with the PDX Package that is created and stored in Teamcenter
2g		The system notifies the user (via email) of the result of the PDX Package generation request.
3a	The user follows a email link to the PDX Package in Teamcenter (or searches) and then uses the UI to specify where to download the PDX Package	System downloads PDX Package to desired location on file system.
3b	The user transfers the PDX Package to the HTE supplier	The system moves the PDX Package
4a	The HTE supplier opens the PDX Package in a PDX Viewer	The PDX Viewer allows the user to navigate the PDX Package content and expand/collapse

Architecture Diagram

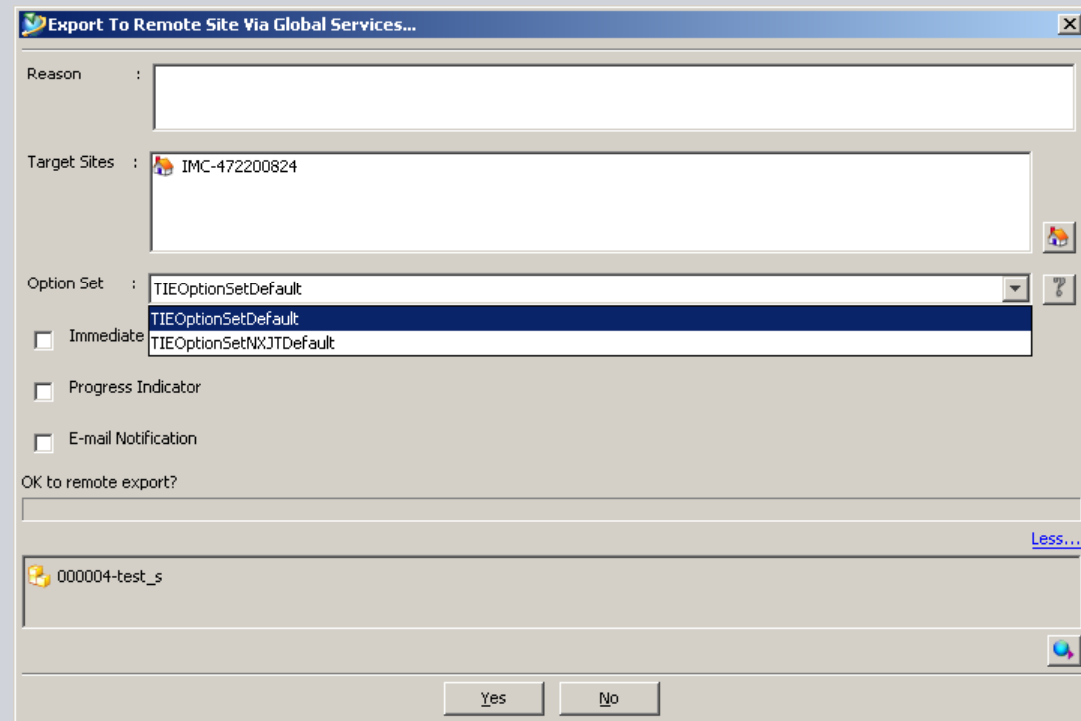
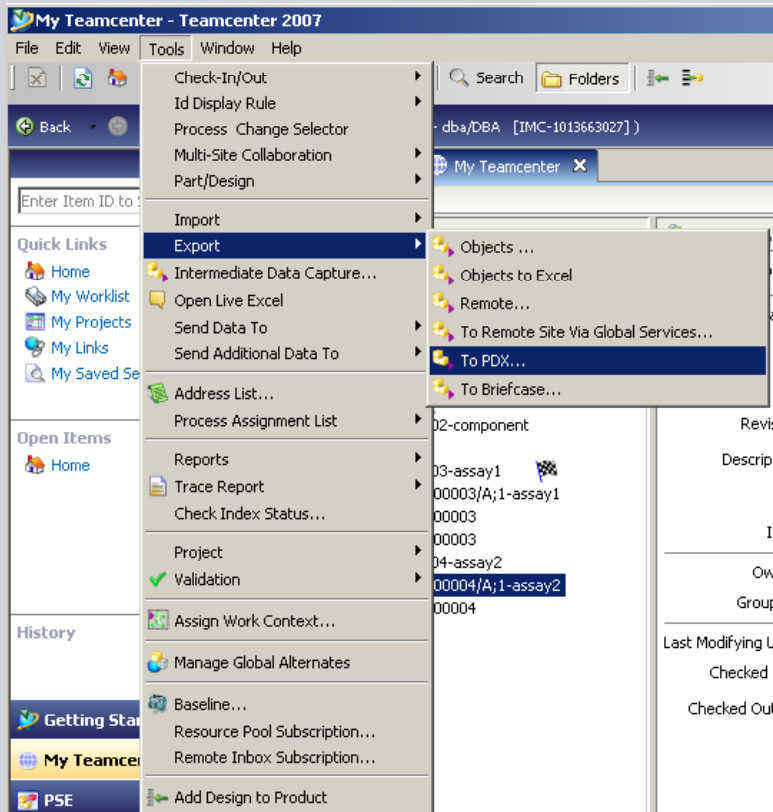


Flow Chart



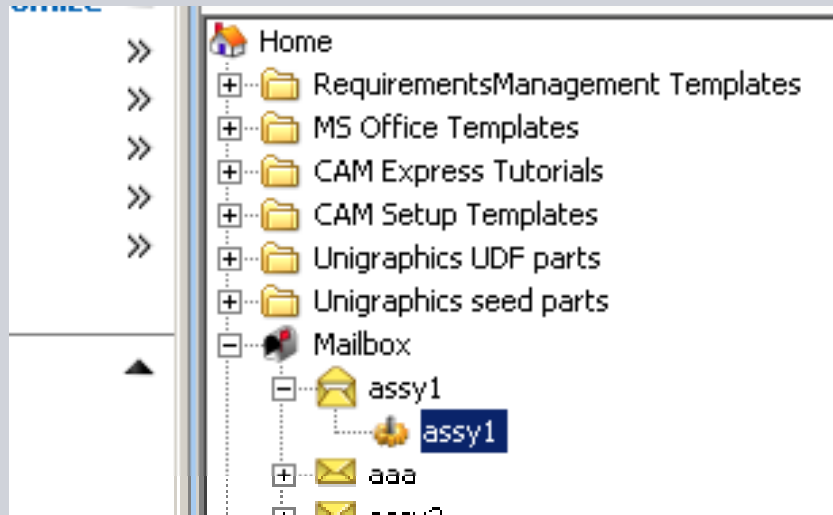
User Interaction – Export dialog

Select an object and invoke PDX Export dialog



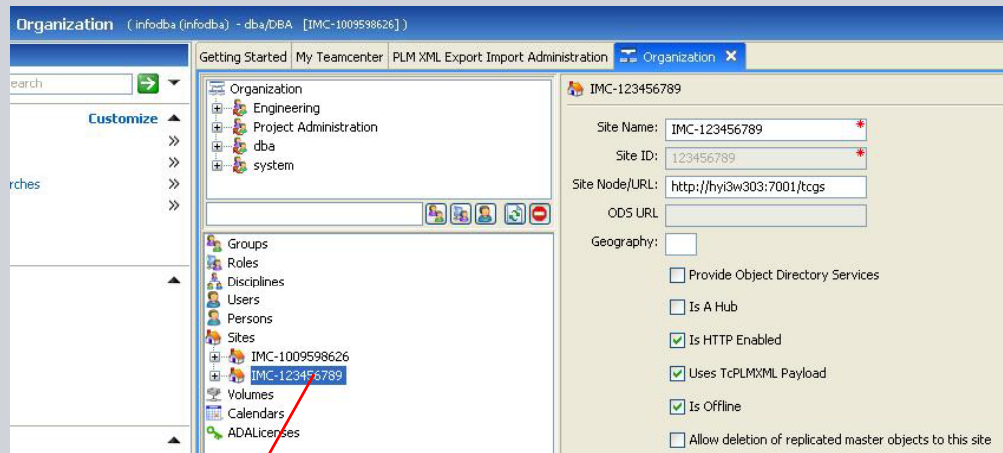
User Interaction – PDX Package

The created PDX Package gets attached as a dataset to an envelope in users mail box

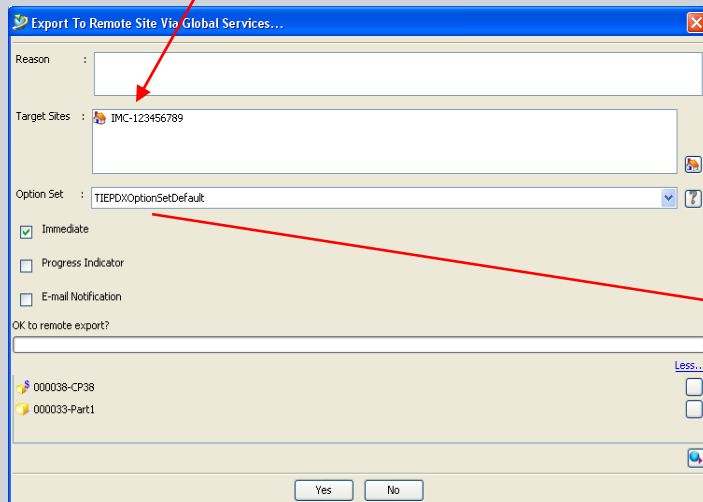


Configuration

Site Selection



Recipe (Transfer Option Set) Selection



TC_gms_export_transfermode_for_IMC-12345678
TIEPDExportDefault

Stylesheet selection

```
<action name="dataTransfer">
  <!-- Tc to Tc -->
  <map source="1009598626" target="123456789">
    <mapper service="XSLTMapService">
      /MapControlFiles/Tc2PDX.xsl
    </mapper>
  </map>
```

Data Mapper in TcGS

Closure Rule - TIEPDXExportDefault

ClosureRule

Traversal Rule Name: TIEPDXExportDefault *

 Description: Closure Rules for TIE PDX Data Export

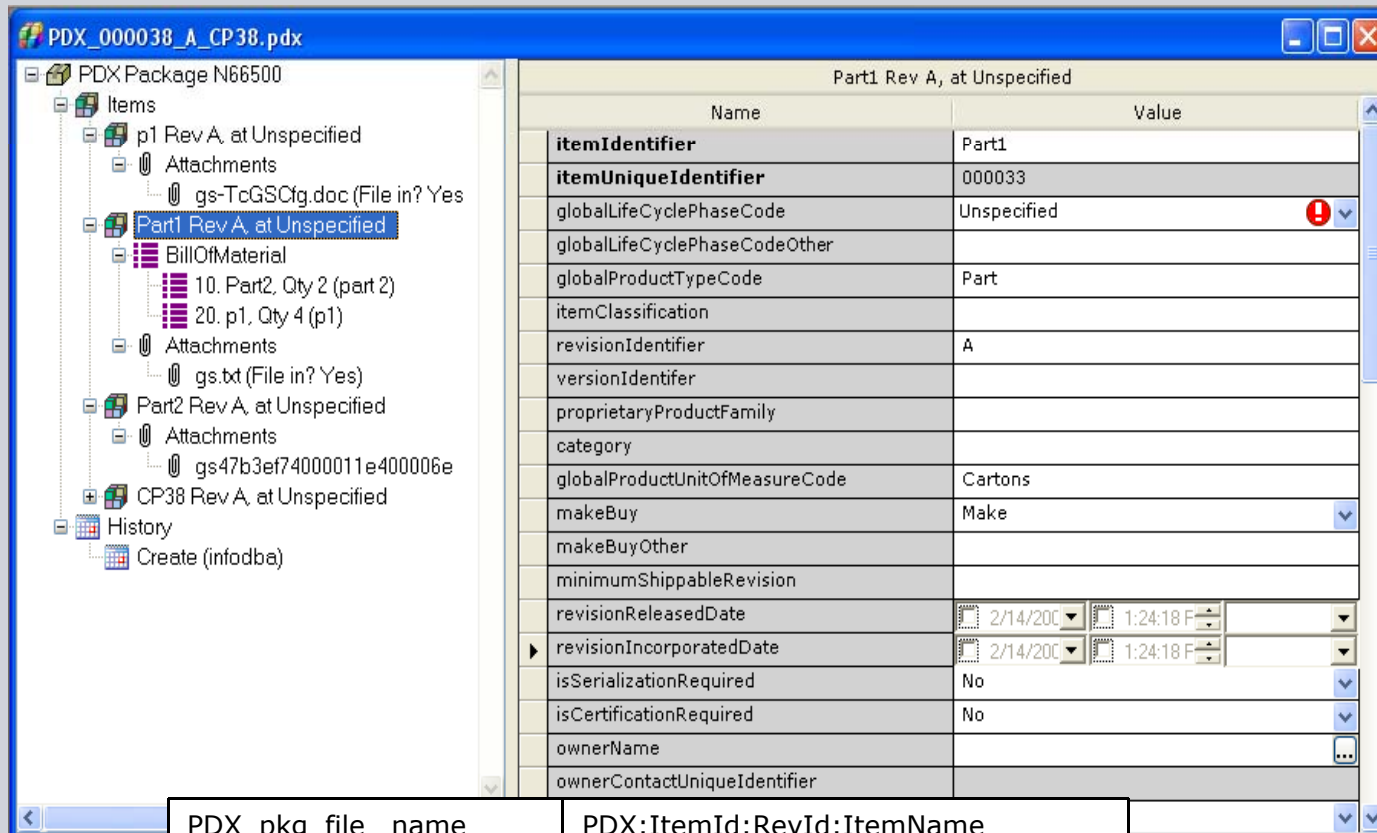
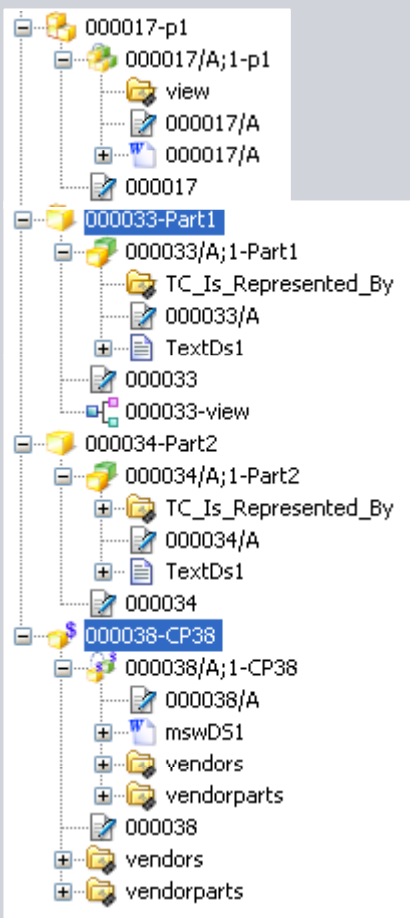
 Scope of Traversal: ☒ Export ☐ Import

 Output Schema Format: TC PLMXML

Prim...	Primary Object	Seco...	Secondary Object	Relation ...	Related Property Or Object	Action Type	Conditional Clause
CLASS	ItemRevision	CLASS	Dataset	RELATIONP25	IMAN_specification	PROCESS	
CLASS	ItemRevision	CLASS	*	RELATIONP25	EC_affected_to_problem_relation	PROCESS	
CLASS	ItemRevision	CLASS	PSBOMViewRevision	ATTRIBUTE	structure_revisions	PROCESS+T...	
CLASS	PSBOMViewRevision	CLASS	PSOccurrence	REFBY	*	PROCESS+T...	
CLASS	PSBOMViewRevision	CLASS	PSBOMView	ATTRIBUTE	bom_view	PROCESS+T...	
TYPE	CommercialPart Revision	TYPE	VendorIdentifier	FUNCTION	process_vendor_selector	PROCESS+T...	FUNC_ARGS("Samsung")
TYPE	IdContext	TYPE	Vendor	RELATIONS2P	*	PROCESS+T...	
TYPE	VendorIdentifier	TYPE	ManufacturerPart	ATTRIBUTE	part	PROCESS+T...	
CLASS	VendorRevision	CLASS	VendorRole	ATTRIBUTE	vendor_role_list	PROCESS+T...	
CLASS	VendorRole	CLASS	*	ATTRIBUTE	vendor_role_info	PROCESS+T...	
TYPE	EngChange Revision	CLASS	BomChange	REFBY	*	PROCESS+T...	
TYPE	EngChange Revision	CLASS	WorkspaceObject	RELATIONP25	*	PROCESS+T...	

Multiple Object Selection

(Combination of Item, Part, Commercial part, BOM and duplicate Datasets)



PDX_pkg_file_ name

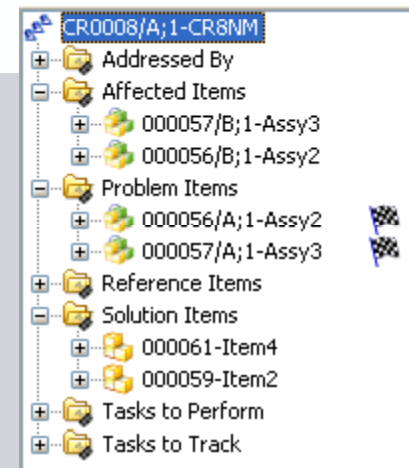
PDX:ItemId:RevId:ItemName

opt_rev_select

latestRevisionOnly

BOM Line	Item Type	Rule conf...	Find No.	Quantity	Make/Buy	Unit Of Meas...	All Notes
000033/A;1-Part1 (view)	Part						
000034/A;1-Part2 x 2	Part	Precise	10	2.000000	Buy	Cartons	GCS CP: GCS CP NOTES FOR PART2
000017/A;1-p1 x 4	Item	Precise	20	4	None	each	MajorFeatureVersion,MinorFeatureVersion

Change Object Export



000056/A;1-Assy2 - Latest Working - Date - "Now"

BOM Line /	Item Type	Quantity	Find No.	Mak...	All Notes	Unit Of Measure
000056/A;1-Assy2 (view)	Item							
000057/A;1-Assy3 (view) x 1	Item	...	1	10	None			each
000059/A;1-Item2 x 4	Item	...	4	20	None			each
000066/A;1-CP66 x 2	CommercialPart	...	2	10	None			each
000058/A;1-Item1 x 1	Item	...	1	40	None			each
000062/A;1-Part1 x 1	Part	...	1	20	None			each
000063/A;1-Part2 x 1	Part	...	1	30	Make	AIE_Exported: aie exported...		each

000056/B;1-Assy2 (view) - Latest Working - Date - "Now"

BOM Line	Item Type	Quantity	Find No.	Mak...	All Notes	Unit Of Measure
000056/B;1-Assy2 (view)	Item							
000057/B;1-Assy3 (view) x 1	Item	...	1	10	None			each
000066/A;1-CP66 x 2	CommercialPart	...	2	10	None			each
000060/A;1-Item3 x 4	Item	...	4	20	None			each
000063/A;1-Part2 x 1	Part	...	1	30	Make	AIE_Exported: aie exported...		each
000058/A;1-Item1 x 1	Item	...	1	40	None			each
000061/A;1-Item4 x 6	Item	...	6	50	None			each

Change Object Export

PDXplorer - [CR8NM.pdx]

File Edit Add Window Help

Item1 Rev A, at Prototype
Part1 Rev A, at Prototype
Part2 Rev A, at Prototype
CP66 Rev A, at Prototype
Attachments
ApprovedManufacturerList
MP70 (Unspecified)

Changes
CR0008 (EngChange, Unspecified)
AffectedItems
Assy2 (rev to B on effectiveDate)
BillOfMaterialMarkups
BillOfMaterialMarkup(NoChange)
BillOfMaterialMarkupRowOld
10. Assy3, Qty 1.0000000000000000 (assembly 3)
BillOfMaterialMarkup(NoChange)
BillOfMaterialMarkupRowOld
30. Part2, Qty 1.0000000000000000 (part 2)
BillOfMaterialMarkup(NoChange)
BillOfMaterialMarkupRowOld
40. Item1, Qty 1.0000000000000000 (item 1)
BillOfMaterialMarkup(Add)
BillOfMaterialMarkupRowNew
50. Item4, Qty 6 (item 4)
BillOfMaterialMarkup(Delete)
BillOfMaterialMarkupRowOld
20. Part1, Qty 1.0000000000000000 (part 1)
Assy3 (rev to B on effectiveDate)
BillOfMaterialMarkups
BillOfMaterialMarkup(NoChange)
BillOfMaterialMarkupRowOld
10. CP66, Qty 2 (CP 66)
BillOfMaterialMarkup(Modify)
BillOfMaterialMarkupRowOld
20. Item2, Qty 4 (item 2)
BillOfMaterialMarkupRowNew
20. Item3, Qty 4 (item 3)
Attachments
ManufacturerParts
MP70 by Samsung
History
Create (infodba)
Contacts
0007500556(Samsung)

000056/A;1-Assy2 - Latest Working - Da

BOM Line /

000056/A;1-Assy2 (view)

000057/A;1-Assy3 (view) x 1
000059/A;1-Item2 x 4
000066/A;1-CP66 x 2
000058/A;1-Item1 x 1
000062/A;1-Part1 x 1
000063/A;1-Part2 x 1

000056/B;1-Assy2 (view) - Latest Worki

BOM Line

000056/B;1-Assy2 (view)

000057/B;1-Assy3 (view) x 1
000066/A;1-CP66 x 2
000060/A;1-Item3 x 4
000063/A;1-Part2 x 1
000058/A;1-Item1 x 1
000061/A;1-Item4 x 6

CR0008 (EngChange, Unspecified)

Name	Value
changeNumber	CR0008
revisionIdentifier	A
changeOriginatedByName	
changeOriginatedByContactUniqueIdentifier	
globalEngineeringChangeStatusCode	Unspecified
globalEngineeringChangeStatusCodeOther	
changeStatusDate	2/14/2008 8:37:05 PM
changeType	EngChange
changeSubType	CR
changeOriginationDate	2/14/2008 2:35:02 PM
requestReason	
changeReason	
workflow	
changeRequestDescription	
changeOwnerName	
changeOwnerContactUniqueIdentifier	
description	CHNG DESC

CR0008/A;1-CR8NM

Addressed By

Affected Items

000057/B;1-Assy3
000056/B;1-Assy2

Problem Items

000056/A;1-Assy2
000057/A;1-Assy3

Reference Items

Solution Items

000061-Item4
000059-Item2

Tasks to Perform

Tasks to Track

Mechatronics Process Management

Whole Product Management

- Cross discipline information management
 - ECAD PCB Integration
 - ECAD Visualization
 - Mechanical Integration
 - Software Management



Simulation Process Management

Digital Validation

- Simulation results management



Reporting & Analytics

Global Collaboration

- Ad-hoc reporting
- Dashboard views



Community Collaboration

Customer Needs Management

- Idea collection and validation
 - Surveys
 - Wiki, Blog, eMail

Extended Team Collaboration

- Vendor Portal
- Distributed stakeholders
- Executive dashboards
- Virtual meetings



Enterprise Knowledge Management

Document management
Information search
Shape search (Geolus)
Classification



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